



STIC Search Report

EIC 1700

STIC Database Tracking Number: 141167

TO: Irina Zemel
Location: REM 10D64
Art Unit : 1711
January 4, 2005

Case Serial Number: 09/973318

From: Usha Shrestha
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-3519
usha.shrestha@uspto.gov

Search Notes



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- I am an examiner in Workgroup: Example: 1713
➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

- Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28



Mellerson, Kendra

From: Unknown@Unknown.com
Sent: Thursday, December 23, 2004 12:30 PM
To: STIC-EIC1700
Subject: Generic form response

ResponseHeader=Commercial Database Search Request

AccessDB#= 141167

LogNumber= _____

Searcher= _____

SearcherPhone= _____

SearcherBranch= _____

MyDate=Thu Dec 23 12:29:27 EST 2004

submitto=STIC-EIC1700@uspto.gov

Name=i. zemel

Empno=71033

Phone=20577

Artunit=1711

Office=REM10D64

Serialnum=09/973318

PatClass=

Earliest=12 Dec 2000

Format1=paper

Searchtopic=Claim 1 structure with: Z is oxygen, Q is pyridine, H is hydrogen, polymeric backbone is end-capped poly(ethylene glycol) as per claim 7.

Comments=

send=SEND

Any Alkyl ✓

any N-containing Hg ✓

=> fil reg

FILE 'REGISTRY' ENTERED AT 15:02:00 ON 04 JAN 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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=> d his

FILE 'HCA' ENTERED AT 13:31:46 ON 04 JAN 2005
E US20030105224/PN

L1 2 S E3
SEL L1 RN

FILE 'REGISTRY' ENTERED AT 13:33:04 ON 04 JAN 2005

L2 22 S E1-E22
L3 13 S L2 AND PMS/CI
L4 STR
L5 3 S L4 SAM
L6 SCR 2043
L7 1 S L4 AND L6
L8 STR L4
L9 1 S L8 AND L6
L10 3 S L9 FUL

FILE 'REGISTRY' ENTERED AT 14:02:53 ON 04 JAN 2005

L11 STR L4
L12 50 S L11 AND L6
L13 STR L11
L14 50 S L13 AND L6
L15 10 S L14 AND POLYETHER?/PCT
L16 2320 S L14 FUL
L17 221 S L16 AND POLYETHER?/PCT
L18 STR
L19 171 S L18 FUL SUB=L17

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L20 106 S L19

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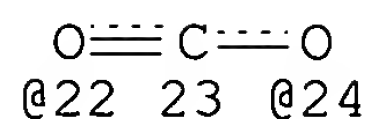
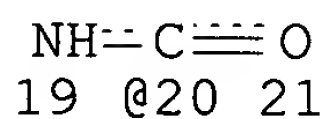
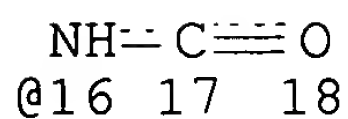
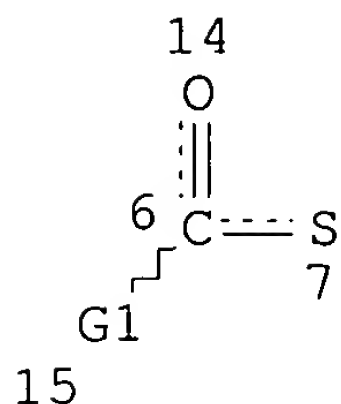
L21 2113647 S CONJUGAT? OR MODIFICATION? OR MODIFY? OR LINK? OR POLYP
L22 2381 S (PEG OR (?ETHYLENE OR ?ALKYLENE?) (W)GLYCOL?) (3A) (PEPTID
L23 16 S (L20 (L) L21) OR (L20 AND L22)
L24 12 S (PEG OR (?ETHYLENE OR ?ALKYLENE?) (W)GLYCOL?) (L) L20
L25 20 S L23 OR L24

FILE 'REGISTRY' ENTERED AT 14:59:22 ON 04 JAN 2005

SAV L19 ZEM973/A

=> d que stat

L6 SCR 2043
L13 STR



VAR G1=O/S/16/20/22/24/AK
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L16 2320 SEA FILE=REGISTRY SSS FUL L13 AND L6

L17 221 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND POLYETHER?/PCT

L18 STR

O—Ak—O
 1 2 3

NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L19 171 SEA FILE=REGISTRY SUB=L17 SSS FUL L18

L20 106 SEA FILE=CAPLUS ABB=ON PLU=ON L19

L21 2113647 SEA FILE=HCAPLUS ABB=ON PLU=ON CONJUGAT? OR MODIFICATIO
 N? OR MODIFY? OR LINK? OR POLYPEPTIDE? OR DRUG? OR
 CARRIER? OR ALPHA-AMINE OR N-TERMIN?

L22 2381 SEA FILE=HCAPLUS ABB=ON PLU=ON (PEG OR (?ETHYLENE OR
 ?ALKYLENE?)) (W) GLYCOL?) (3A) (PEPTIDE? OR PROTEIN?)

L23 16 SEA FILE=HCAPLUS ABB=ON PLU=ON (L20 (L) L21) OR (L20
 AND L22)

L24 12 SEA FILE=HCAPLUS ABB=ON PLU=ON (PEG OR (?ETHYLENE OR
 ?ALKYLENE?)) (W) GLYCOL?) (L) L20

L25 20 SEA FILE=HCAPLUS ABB=ON PLU=ON L23 OR L24

=> d 125 all ibib abs hitstr hitind

L25 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:906019 HCAPLUS

DN 141:380799

ED Entered STN: 29 Oct 2004

TI Photocurable adhesive composition and its use in the optical field

IN Weber, Steven; Jiang, Peiqi; Turshani, Yassin; Jallouli, Aref

PA Essilor International Compagnie Generale d'Optique, Fr.

SO PCT Int. Appl., 68 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G02B001-04

ICS G02B001-10; C09J004-00; C09J133-14; C08F220-38

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37, 63, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004092787	A1	20041028	WO 2004-EP4114	20040415

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2003-417525 A 20030417

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004092787	ICM	G02B001-04
	ICS	G02B001-10; C09J004-00; C09J133-14; C08F220-38

AB Photocurable adhesive compns. are described which comprise (based on total weight of photopolymerizable monomers and/or oligomers) 5-60 weight

% of ≥ 1 mono or polyacrylate monomer or oligomer; 5-50 weight % of ≥ 1 thio(meth)acrylate monomer or oligomer; and 20-50 weight % of ≥ 1 aromatic dimethacrylate monomer or oligomer; with the restriction that the composition does not contain a brominated monofunctional acrylate. Methods for transferring coatings from supports to thermoplastic substrates using the adhesives are also described. The substrates may be lenses, especially ophthalmic lenses.

The coatings may comprise a hydrophobic top coat, an antireflective coating layer, an anti-abrasion coating layer, an impact resistant coating layer, a photochromic coating layer, a dying coating layer, a polarized coating layer, a printed layer or a stack of ≥ 2 of these coating layers. Overmolding processes are also described which produce a substrate overmolded with a cured layer of the curable adhesive composition. Processes are also described for producing

laminated thermoplastic articles (e.g., ophthalmic lenses) by joining elements using the adhesives.

ST bromoacrylate free photocurable adhesive compn; photocurable adhesive compn; coating transfer photocurable adhesive compn; overmolding process photocurable adhesive compn; thermoplastic laminate formation photocurable adhesive compn; ophthalmic lens photocurable adhesive compn

IT Optical materials

(adhesives; photocurable adhesive compns. and their uses)

IT Adhesives

(optical; photocurable adhesive compns. and their uses)

IT Coating process

Lamination

Molding of plastics and rubbers

(photocurable adhesive compns. and their uses in)

IT Eyeglass lenses

Lenses

(photocurable adhesive compns. and their uses in producing)

IT Polycarbonates, uses

(photocurable adhesive compns. and their uses with)

IT Adhesives

(photocurable; photocurable adhesive compns. and their uses)

IT Plastics, uses

(thermoplastics; photocurable adhesive compns. and their uses with)

IT 162881-26-7, Irgacure 819

(photocurable adhesive compns. and their uses)

IT 1680-21-3, Triethylene glycol diacrylate 2223-82-7, Neopentyl glycoldiacrylate 2399-48-6, Tetrahydrofurfuryl acrylate

4074-88-8, Diethylene glycol diacrylate 13048-33-4, 1,6-Hexanediol diacrylate 17831-71-9, Tetraethylene glycol diacrylate

41637-38-1, Ethoxylated bisphenol A dimethacrylate 117651-91-9,

Bis-2-(methacryloylthioethyl)sulfide 784208-48-6,
 Bis-2-(methacryloylthioethyl)sulfide-diethylene
 glycol diacrylate-ethoxylated bisphenol A dimethacrylate
 copolymer

(photocurable adhesive compns. and their uses)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Kobayashi, S; US 6369269 B2 2002 HCAPLUS
- (2) Ppg Ind Ohio Inc; WO 03011925 A 2003 HCAPLUS
- (3) Terahertz Photonics Ltd; WO 0194430 A 2001 HCAPLUS

ACCESSION NUMBER: 2004:906019 HCAPLUS

DOCUMENT NUMBER: 141:380799

TITLE: Photocurable adhesive composition and its use in
 the optical field

INVENTOR(S): Weber, Steven; Jiang, Peiqi; Turshani, Yassin;
 Jallouli, Aref

PATENT ASSIGNEE(S): Essilor International Compagnie Generale
 d'Optique, Fr.

SOURCE: PCT Int. Appl., 68 pp.
 CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004092787	A1	20041028	WO 2004-EP4114	20040415

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,
 CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
 GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,
 KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
 MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,
 SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
 VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,
 DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
 ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-417525 A

200304
 17

AB Photocurable adhesive compns. are described which comprise (based on

total weight of photopolymerizable monomers and/or oligomers) 5-60 weight

% of ≥ 1 mono or polyacrylate monomer or oligomer; 5-50 weight % of ≥ 1 thio(meth)acrylate monomer or oligomer; and 20-50 weight % of ≥ 1 aromatic dimethacrylate monomer or oligomer; with the restriction that the composition does not contain a brominated monofunctional acrylate. Methods for transferring coatings from supports to thermoplastic substrates using the adhesives are also described. The substrates may be lenses, especially ophthalmic

lenses.

The coatings may comprise a hydrophobic top coat, an antireflective coating layer, an anti-abrasion coating layer, an impact resistant coating layer, a photochromic coating layer, a dying coating layer, a polarized coating layer, a printed layer or a stack of ≥ 2 of these coating layers. Overmolding processes are also described which produce a substrate overmolded with a cured layer of the curable adhesive composition. Processes are also described for

producing

laminated thermoplastic articles (e.g., ophthalmic lenses) by joining elements using the adhesives.

IT **784208-48-6**, Bis-2-(methacryloylthioethyl)sulfide-diethylene glycol diacrylate-ethoxylated bisphenol A dimethacrylate copolymer

(photocurable adhesive compns. and their uses)

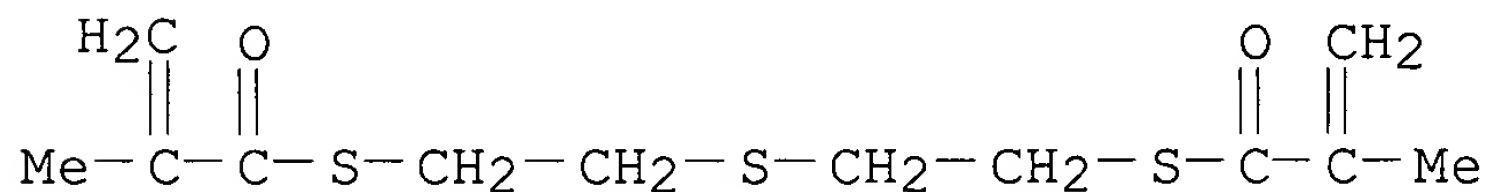
RN 784208-48-6 HCAPLUS

CN 2-Propenoic acid, oxydi-2,1-ethanediyl ester, polymer with α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and S,S'-(thiodi-2,1-ethanediyl) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 117651-91-9

CMF C12 H18 O2 S3



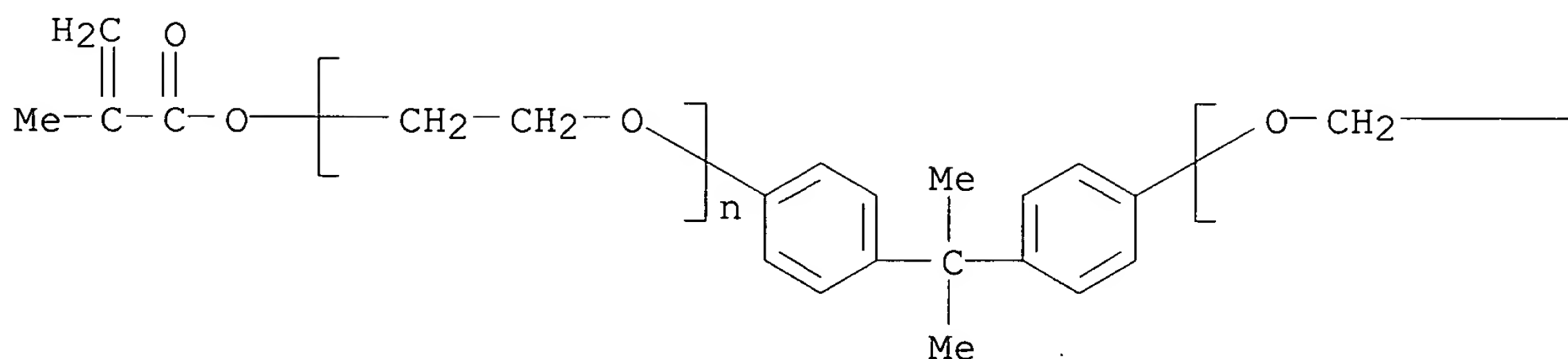
CM 2

CRN 41637-38-1

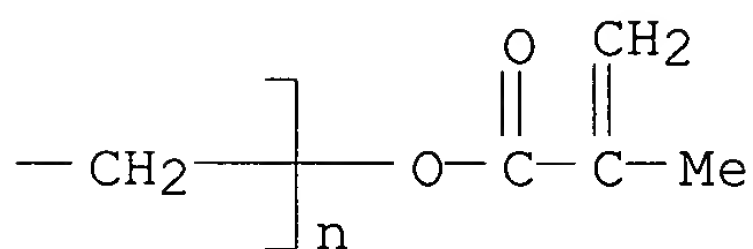
CMF (C2 H4 O)_n (C2 H4 O)_n C23 H24 O4

CCI PMS

PAGE 1-A



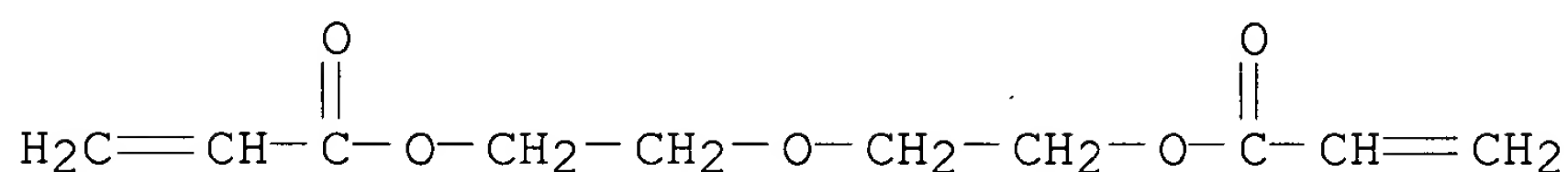
PAGE 1-B



CM 3

CRN 4074-88-8

CMF C10 H14 O5



IC ICM G02B001-04

ICS G02B001-10; C09J004-00; C09J133-14; C08F220-38

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37, 63, 73

IT 1680-21-3, Triethylene glycol diacrylate 2223-82-7, Neopentyl glycoldiacrylate 2399-48-6, Tetrahydrofurfuryl acrylate 4074-88-8, Diethylene glycol diacrylate 13048-33-4, 1,6-Hexanediol diacrylate 17831-71-9, Tetraethylene glycol diacrylate 41637-38-1, Ethoxylated bisphenol A dimethacrylate 117651-91-9, Bis-2-(methacryloylthioethyl)sulfide **784208-48-6**, Bis-2-(methacryloylthioethyl)sulfide-**diethylene glycol** diacrylate-ethoxylated bisphenol A dimethacrylate copolymer

(photocurable adhesive compns. and their uses)

L25 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:905400 HCAPLUS
DOCUMENT NUMBER: 141:362782
TITLE: Modification of silicon-containing scanning
probe microscopy tips and growth of oligo-or
poly (ethylene glycol) films on silicon surfaces
through formation of si-c bonds
INVENTOR(S): Cai, Chengzhi; Yam, Chi Ming; Xiao, Zhongdang;
Gu, Jianhua
PATENT ASSIGNEE(S): University of Houston, USA
SOURCE: U.S. Pat. Appl. Publ., 47 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2004213910	A1	20041028	US 2003-742047	20031219
PRIORITY APPLN. INFO.:			US 2002-434899P	P 20021220
			US 2003-497148P	P 20030822

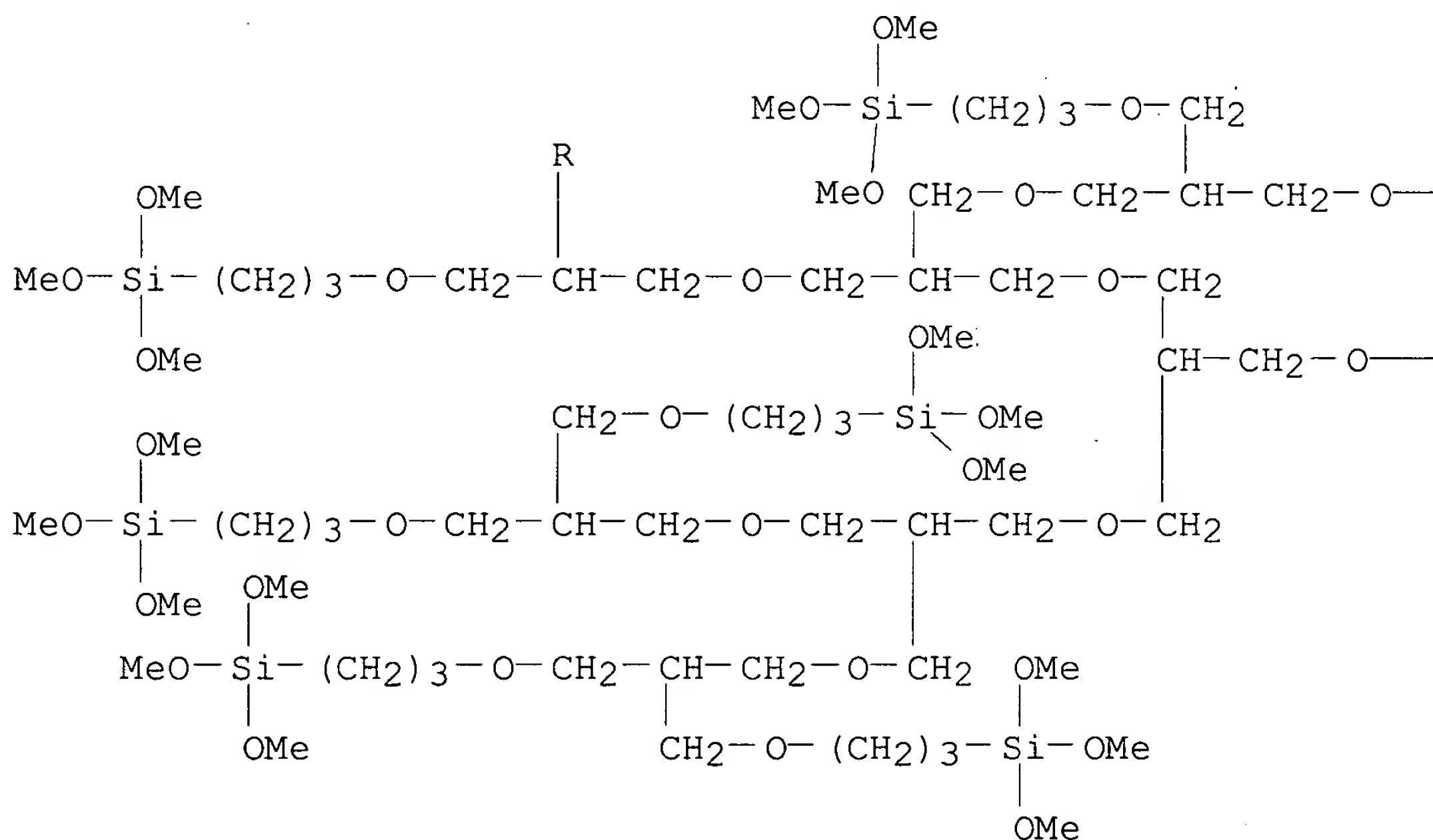
AB The present invention provides for a practical method of grafting oligo- and/or poly(ethyleneglycol) (OEG and/or PEG) derivs. onto hydrogen-terminated silicon surfaces, including the surfaces of silicon scanning probe microscopy (SPM) tips, by hydrosilylation of OEG and/or PEG-terminated alkenes. This invention is related to the development of silicon-based bio-devices, including biochips, biosensors such as SPM probes, microarrays, micro-fluidic systems, and implantable microdevices. This invention is also a practical method to modify (many) SPM probe tips with OEG/PEG derivs. and to subsequently modify the tip apex with functional single mols. to improve the specificity and resolution of AFM imaging and measurements.

The functional mols. include the dendritic adsorbates with a functional group at their focal point and with or without a

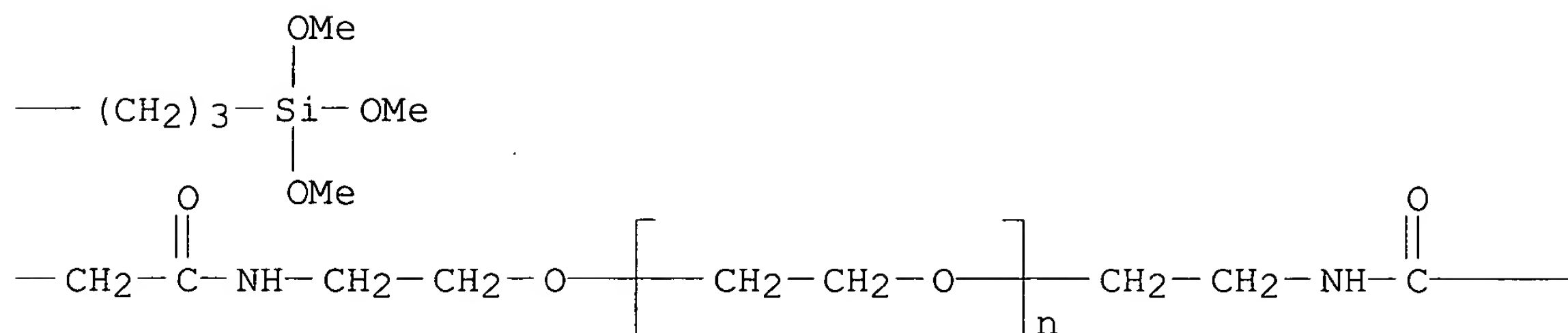
IT 778592-70-4P

RN 778592-70-4 HCAPLUS

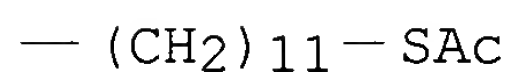
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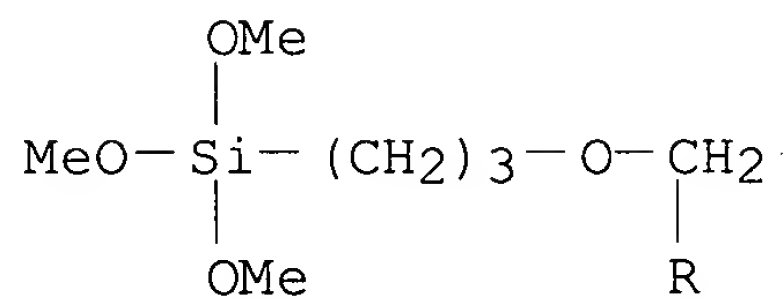
PAGE 1-B



PAGE 1-C



PAGE 2-A



IC ICM B32B009-00
 NCL 427299000; 428446000
 CC 9-14 (Biochemical Methods)
 IT 778592-68-0P 778592-69-1P **778592-70-4P**

(**modification** of silicon-containing scanning probe microscopy tips and growth of oligo-or poly (**ethylene glycol**) films on silicon surfaces through formation of si-c bonds)

L25 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:905357 HCAPLUS
 DOCUMENT NUMBER: 141:384303
 TITLE: Conjugates containing releasable linkage and
 pharmaceutical compositions containing the same
 INVENTOR(S): Zalipsky, Samuel; Kiwan, Radwan
 PATENT ASSIGNEE(S): Alza Corporation, USA
 SOURCE: U.S. Pat. Appl. Publ., 56 pp., Cont.-in-part of
 U.S. Ser. No. 371,169.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 8
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 2004213759	A1	20041028	US 2003-723473	200311 26
US 6342244	B1	20020129	US 2000-556056	200004 21
US 2002128195	A1	20020912	US 2001-982336	200110 15
US 6605299	B2	20030812		
US 2003211079	A1	20031113	US 2003-371169	200302 21
PRIORITY APPLN. INFO.:			US 1999-130897P	P 199904 23
			US 2000-556056	A1 200004 21
			US 2001-982336	A1 200110 15
			US 2003-371169	A2 200302 21

AB A conjugate comprised of a hydrophilic polymer covalently yet reversibly linked to a amine-, hydroxy- or carboxyl-containing ligand is

described. The resulting conjugate is capable of releasing the parent amine, hydroxy, or carboxyl-containing compound via thiol-mediated

cleavage. The system allows for delivery of various amino-, hydroxy-, or carboxy-containing drugs in the form of their thiolytically

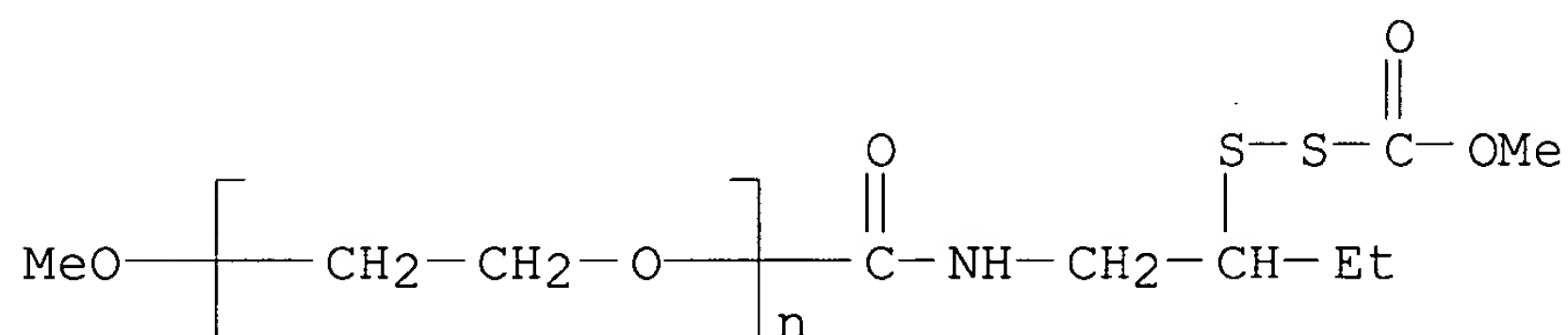
cleavable macromol. conjugates. For example, the prodrug conjugate of mPEG dithiobenzyl nitrophenyl chloroformate with lysozyme was prepared and was found to release the active enzyme by cysteine.

IT 304013-09-0

(pharmaceutical compns. containing thio-linkage
conjugates of polymers with **drugs** or liposomes)

RN 304013-09-0 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[2-[(methoxycarbonyl)dithio]butyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)

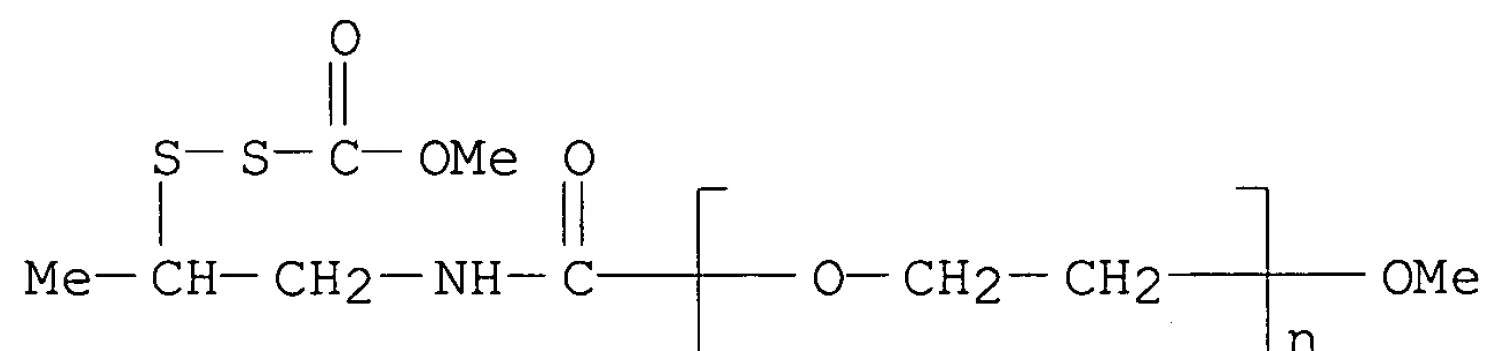


IT 304013-18-1P

(pharmaceutical compns. containing thio-linkage
conjugates of polymers with **drugs** or liposomes)

RN 304013-18-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[2-[(methoxycarbonyl)dithio]propyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K031-785

ICS C08G063-48; C08G063-91

NCL 424078270; 525054100

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 25, 35
IT 50-07-7, Mitomycin C 75-44-5, Phosgene 78-96-6,
1-Amino-2-propanol 107-15-3, Ethylene diamine, reactions
121-44-8, Triethyl amine, reactions 124-63-0, Methanesulfonyl
chloride 3695-77-0, Triphenylmethanethiol 4146-16-1, 1-Amino
2-propanethiol hydrochloride 4521-31-7, O-Mercaptobenzyl alcohol
4537-76-2, Distearoylphosphatidyl ethanolamine 7693-46-1,
P-Nitrophenyl chloroformate 9001-63-2, Lysozyme 9004-74-4
10567-21-2 26555-40-8, Methoxy carbonyl sulfenyl chloride
33069-62-4, Paclitaxel 51023-28-0 53339-53-0, p-Mercaptobenzyl
alcohol 113427-24-0, EPREX 124423-42-3 **304013-09-0**
(pharmaceutical compns. containing thio-linkage
conjugates of polymers with **drugs** or liposomes)
IT 124661-64-9P 304013-12-5P 304013-14-7P 304013-16-9P
304013-18-1P 304013-19-2P 304013-20-5P 304013-21-6P
474404-82-5P 781674-80-4P 781674-81-5P
(pharmaceutical compns. containing thio-linkage
conjugates of polymers with **drugs** or liposomes)

L25 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:493895 HCAPLUS

DOCUMENT NUMBER: 141:59651

TITLE: Preparing antigen masked red blood cells having
reduced hemolysis by sera by modification with
PEG derivatives

INVENTOR(S): Stassinopoulos, Adonis; Mathur, Shruti

PATENT ASSIGNEE(S): Cerus Corporation, USA

SOURCE: PCT Int. Appl., 75 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2004050897	A2	20040617	WO 2003-US38349	200312 03
WO 2004050897	A3	20040826		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,			

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 DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
 SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
 MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2002-431213P

P

200212
04

US 2002-431214P

P

200212
04

US 2002-431215P

P

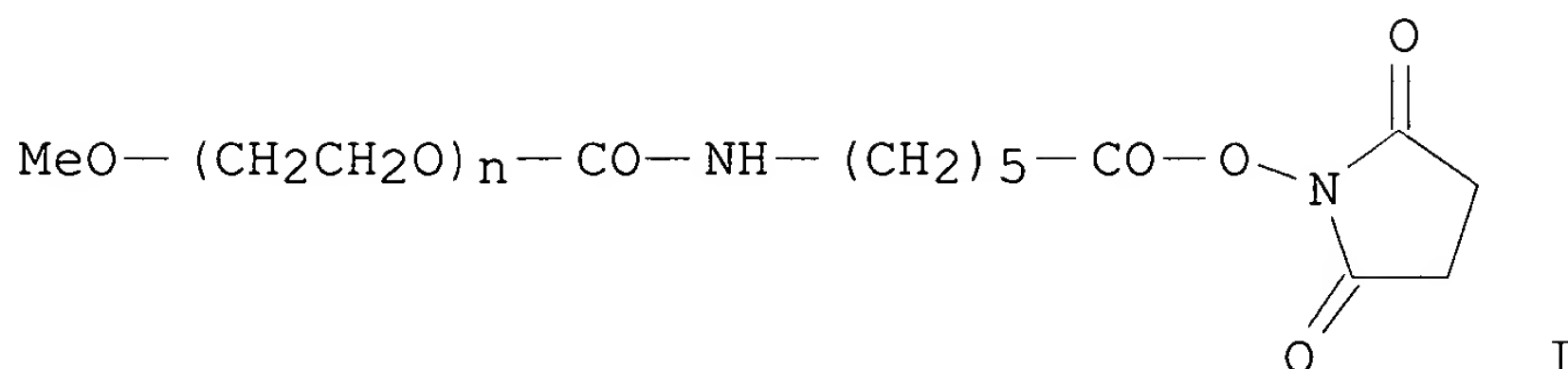
200212
04

US 2002-431216P

P

200212
04

GI



AB Methods are provided for the preparation of an RBC composition having significantly reduced antigenicity and having reduced levels of hemolysis by any serum or plasma sample. The methods of preparation of the red cell compns. involve the reaction of an activated antigen masking compound having a mol. weight of approx. 20-40 kDa, wherein the resulting red cells are not readily hemolyzed by any serum or plasma sample, for example by complement lysis. The RBC compns. are of particular use for introduction into an individual in cases where the potential for an immune reaction is high, for example in alloimmunized blood recipients or in trauma situations where the possibility of transfusion of a mismatched unit of blood is higher. E.g., I was prepared from $\text{MeO}(\text{CH}_2\text{CH}_2\text{O})_n\text{CONH}(\text{CH}_2)_5\text{CO}_2\text{H}$ and NHS. One of the examples given is determination of agglutination reaction of RBC with I

and similar derivs. Hemolysis of modified RBC are also given.

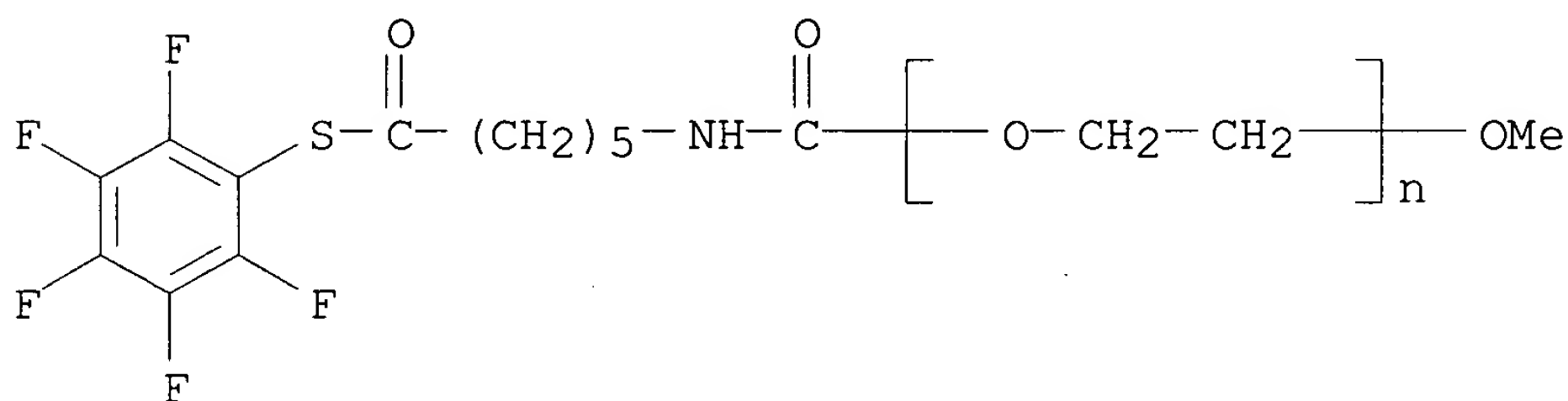
IT 620597-27-5P 620597-28-6P 620597-29-7P

620597-30-0P 620597-31-1P

(preparation of antigen masked red blood cells having reduced hemolysis by sera by **modification** with **PEG** derivs.)

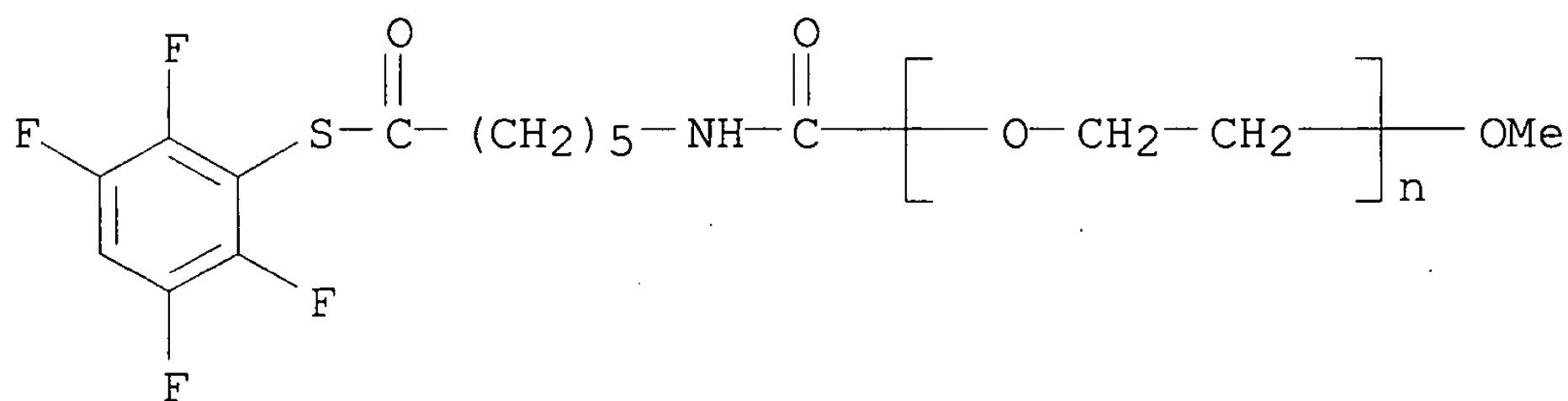
RN 620597-27-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-[(pentafluorophenyl)thio]hexyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)



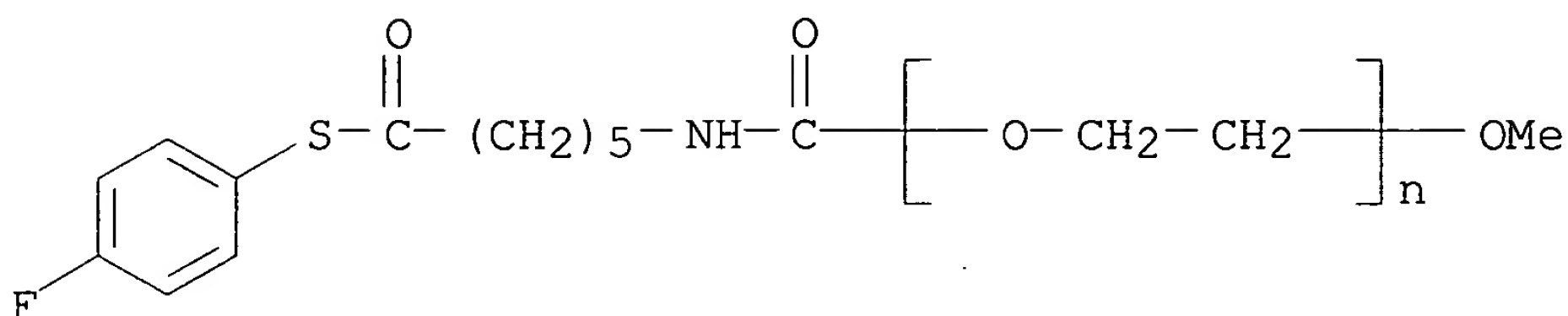
RN 620597-28-6 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-[(2,3,5,6-tetrafluorophenyl)thio]hexyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)



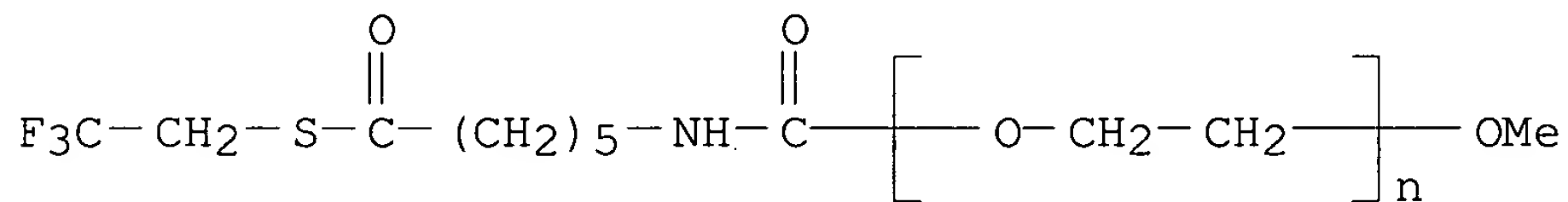
RN 620597-29-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-[(4-fluorophenyl)thio]hexyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)



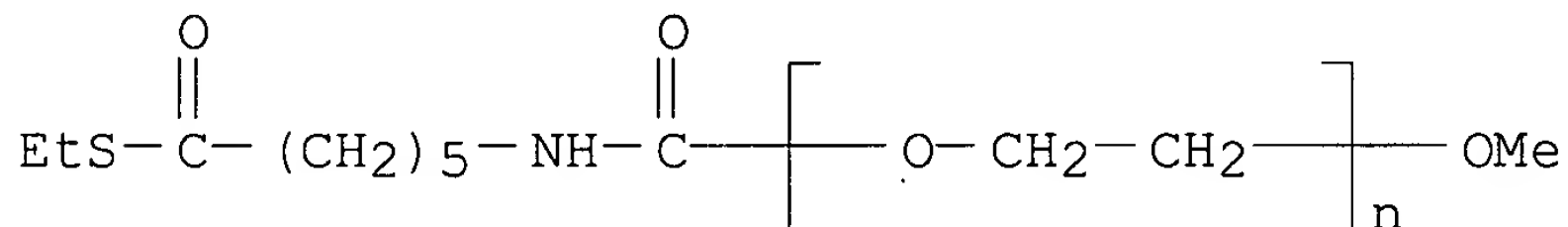
RN 620597-30-0 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-[(2,2,2-trifluoroethyl)thio]hexyl]amino]carbonyl]- ω -methoxy- (9CI)
(CA INDEX NAME)



RN 620597-31-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-(ethylthio)-6-oxohexyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)



IC ICM C12Q

CC 63-3 (Pharmaceuticals)

Section cross-reference(s): 15, 35

IT 75-89-8P, 2,2,2-Trifluoroethanol 135649-01-3P 620597-18-4P
620597-20-8P 620597-22-0P 620597-24-2P 620597-25-3P
620597-26-4P **620597-27-5P** **620597-28-6P**
620597-29-7P **620597-30-0P** **620597-31-1P**
705261-19-4P

(preparation of antigen masked red blood cells having reduced hemolysis by sera by **modification** with **PEG** derivs.)

L25 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:493853 HCAPLUS

DOCUMENT NUMBER: 141:59650

TITLE: Preparation of antigen masked red blood cells

with reduced hemolysis by modification with PEG derivatives

INVENTOR(S): Stassinopoulos, Adonis; Clark, Basha

PATENT ASSIGNEE(S): Cerus Corporation, USA

SOURCE: PCT Int. Appl., 68 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004050848	A2	20040617	WO 2003-US38224	20031203

WO 2004050848 A3 20041209

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2002-431213P	P	20021204
US 2002-431214P	P	20021204
US 2002-431215P	P	20021204
US 2002-431216P	P	20021204

AB Methods are provided for the preparation of an RBC composition which has significantly reduced antigenicity. The methods of preparation of the

red cell compns. involve the optimization of reaction conditions for attaching antigen masking compds. to the red cells without significantly affecting the function of the red cells, in particular reducing the hemolysis of the red cells from processing of the cells. The RBC compns. are of particular use for introduction into an individual in cases where the potential for an immune reaction is high, for example in allo-immunized blood recipients or in trauma situations where the possibility of transfusion of a mismatched unit of blood is higher. The RBC compns. of this invention provide a much lower risk of a transfusion associated immune reaction. Thus, a derivative of PEG was prepared by from $\text{MeO}(\text{CH}_2\text{CH}_2\text{O})_n\text{CONH}(\text{CH}_2)_5\text{CO}_2\text{H}$ and NHS.

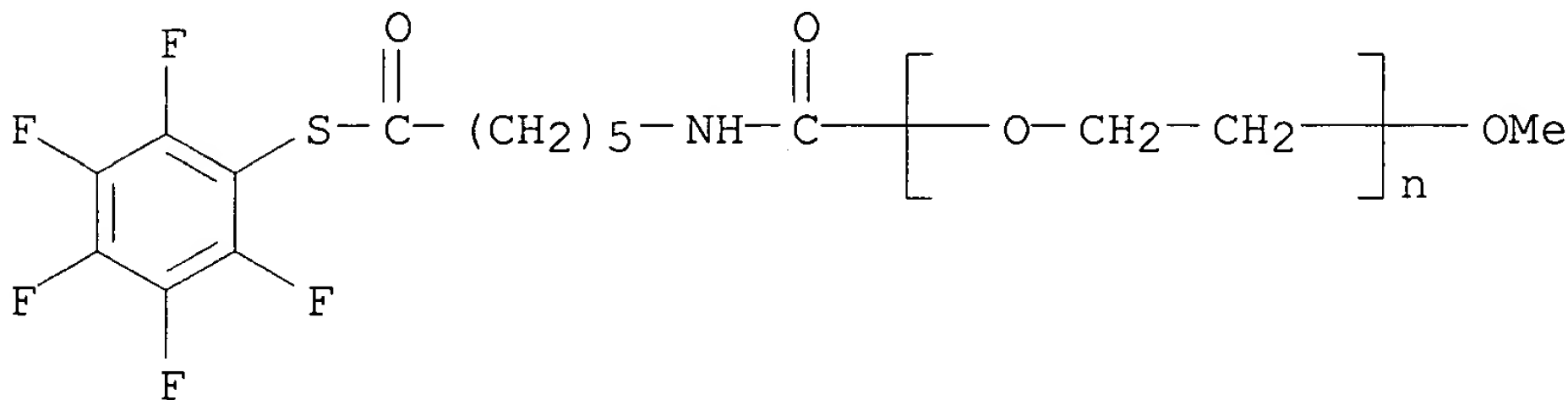
IT 620597-27-5P 620597-28-6P 620597-29-7P
620597-30-0P 620597-31-1P

(preparation of antigen masked red blood cells with reduced hemolysis

by modification with PEG derivs.)

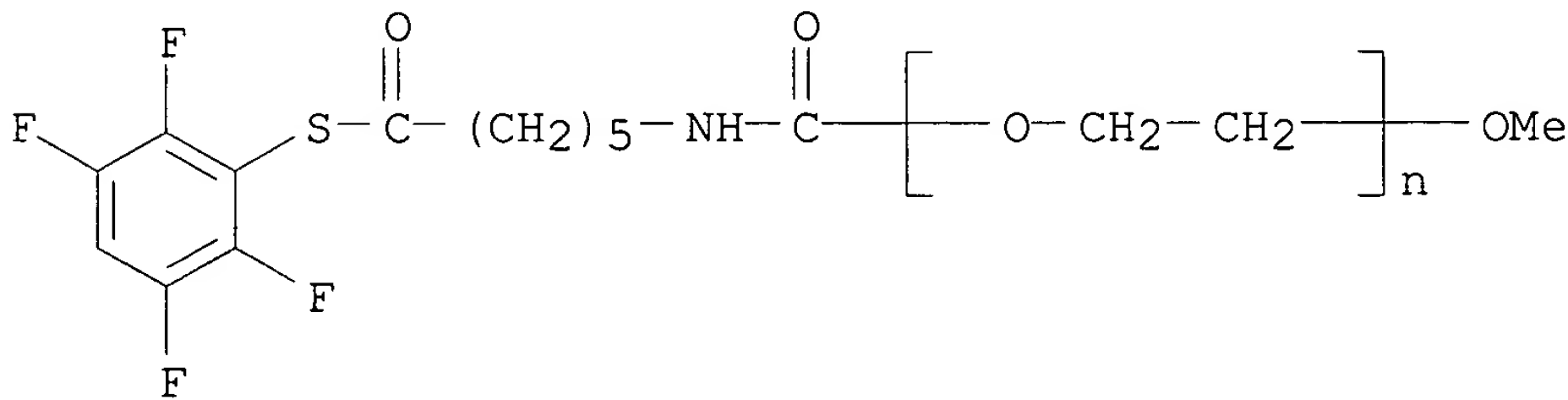
RN 620597-27-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-[(pentafluorophenyl)thio]hexyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)



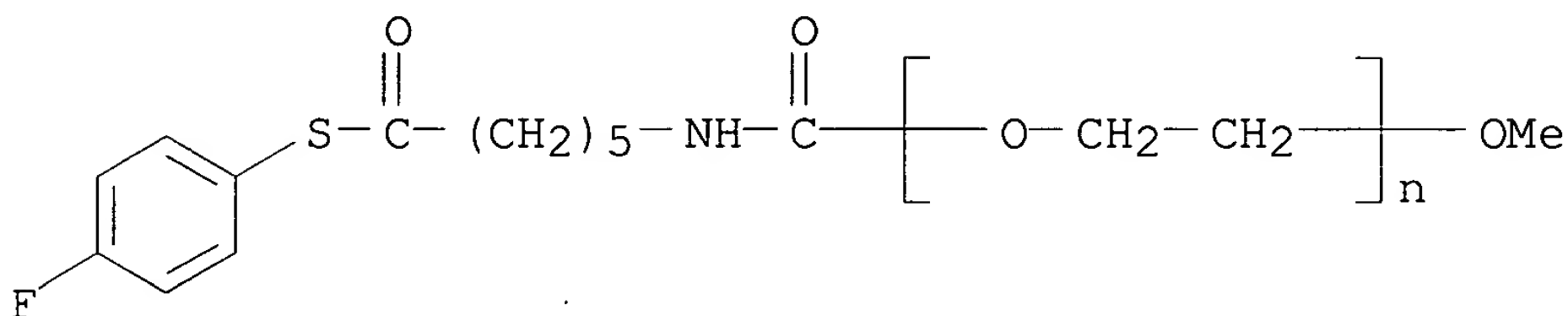
RN 620597-28-6 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-[(2,3,5,6-tetrafluorophenyl)thio]hexyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)



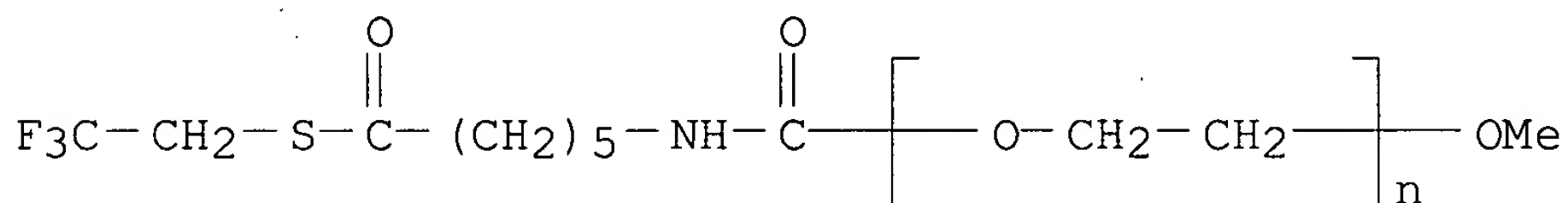
RN 620597-29-7 HCAPLUS

CN	Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-[(4-fluorophenyl)thio]hexyl]amino]carbonyl]- ω -methoxy-	(9CI)	(CA
	INDEX NAME)		



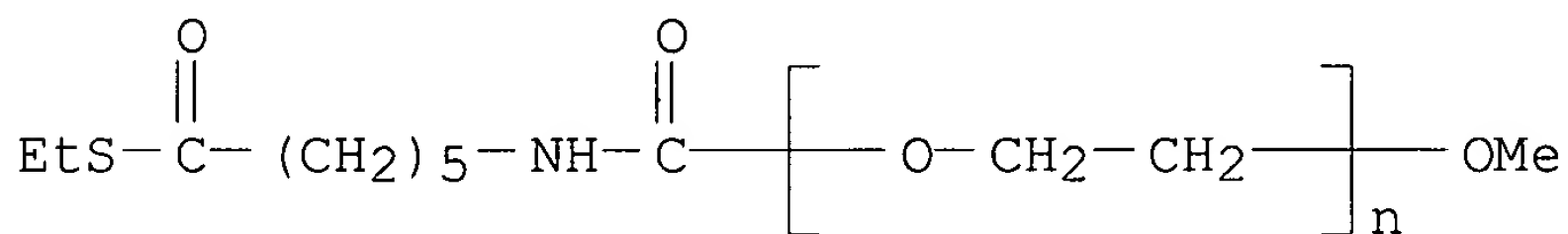
RN 620597-30-0 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-[(2,2,2-trifluoroethyl)thio]hexyl]amino]carbonyl]- ω -methoxy- (9CI)
(CA INDEX NAME)



RN 620597-31-1 HCAPLUS

CN	Poly(oxy-1,2-ethanediyl), α -[[[6-(ethylthio)-6-oxohexyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)
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IC ICM C12N

CC 63-3 (Pharmaceuticals)

Section cross-reference(s): 15, 35

IT	620597-18-4P	620597-20-8P	620597-22-0P	620597-24-2P
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620597-25-3P 620597-26-4P 620597-27-5P

620597-28-6P 620597-29-7P 620597-30-0P

620597-31-1P 705261-19-4P

(preparation of antigen masked red blood cells with reduced hemolysis)

by modification with PEG derivs.)

L25 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:490702 HCAPLUS
 DOCUMENT NUMBER: 141:59647
 TITLE: Biological materials activated with polyethylene glycol compounds
 INVENTOR(S): Stassinopoulos, Adonis; Zhou, Xue Min; Bowers, Simeon G.
 PATENT ASSIGNEE(S): Cerus Corporation, USA
 SOURCE: PCT Int. Appl., 50 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004050029	A2	20040617	WO 2003-US38262	20031203

WO 2004050029 A3 20041021

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-431213P P 20021204

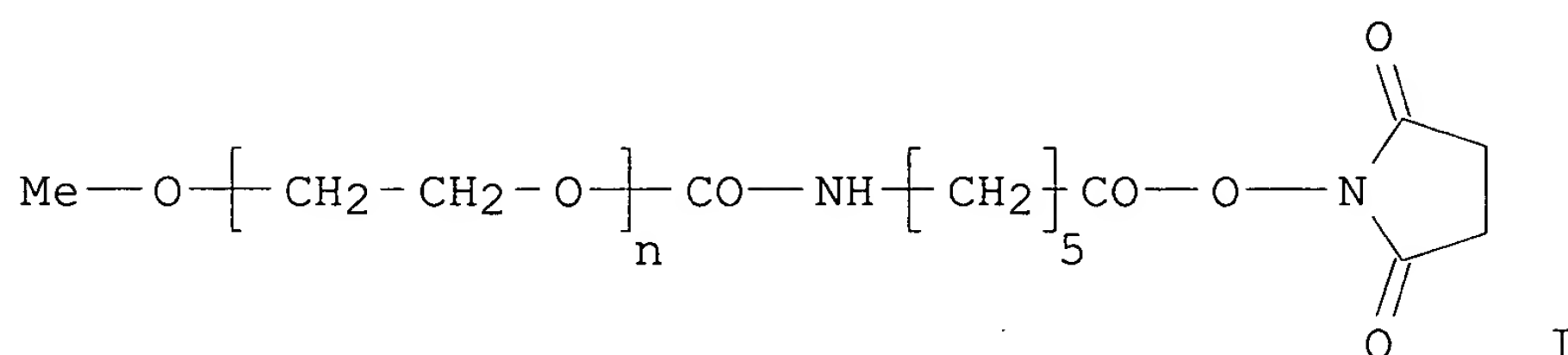
US 2002-431214P P 20021204

US 2002-431215P P 20021204

US 2002-431216P P

200212
04

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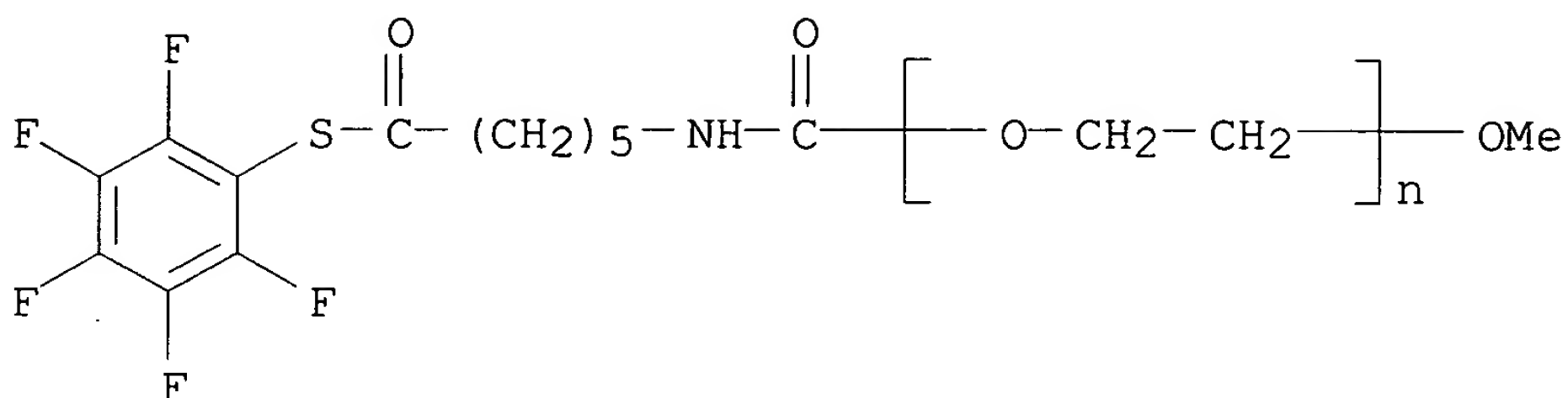
AB The present invention involves new polyethylene glycol derivs. that can be reacted with biol. materials to covalently attach the polyethylene glycol derivative to the material. The biol. materials may include proteins, liposomes, or cellular compns. The attachment of the polyethylene glycol to the materials results in improved biol. properties, such as reduced elimination of the materials by the immune system. In the case of red blood cells (RBC), the attachment of the compound provides either antigen masking of the red cells or improved viscosity of the red cells at low shear rates. E.g., I was prepared from $\text{MeO}(\text{CH}_2\text{CH}_2\text{O})_n\text{CONH}(\text{CH}_2)_5\text{CO}_2\text{H}$ and NHS. RBC were modified with I and a number of examples given showing improvement of properties of RBCs.

IT 620597-27-5P 620597-28-6P 620597-29-7P
620597-30-0P 620597-31-1P

(biol. materials activated with **polyethylene glycol** compds.)

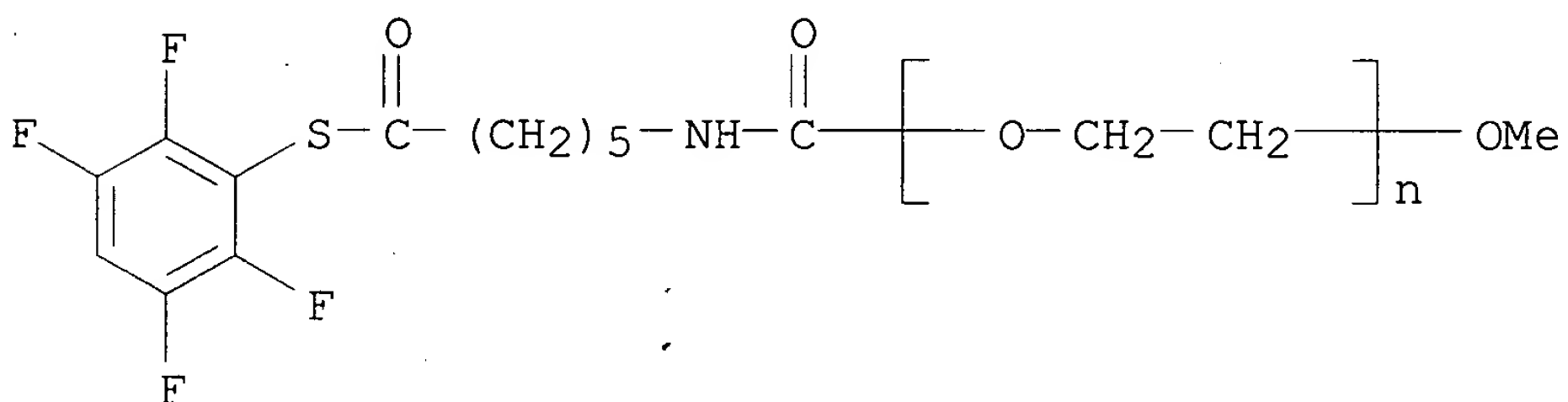
RN 620597-27-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-
[(pentafluorophenyl)thio]hexyl]amino]carbonyl]- ω -methoxy-
(9CI) (CA INDEX NAME)



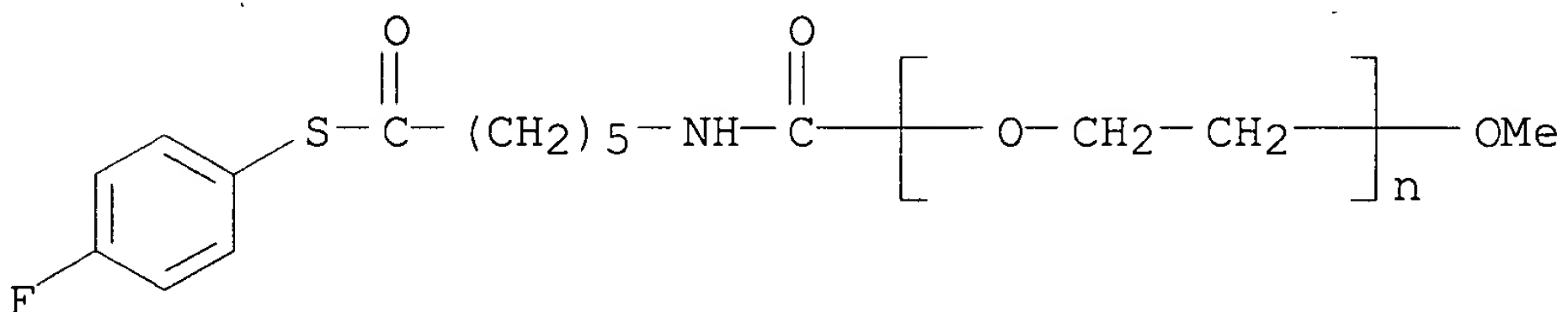
RN 620597-28-6 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-[(2,3,5,6-tetrafluorophenyl)thio]hexyl]amino]carbonyl]- ω -methoxy- (9CI)
(CA INDEX NAME)



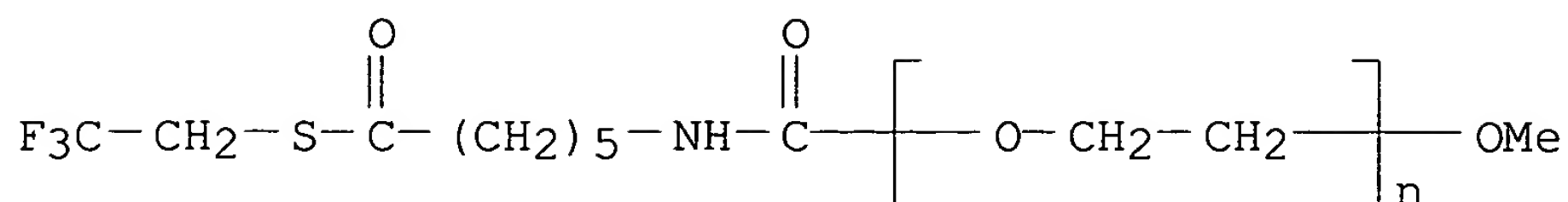
RN 620597-29-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-[(4-fluorophenyl)thio]hexyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)



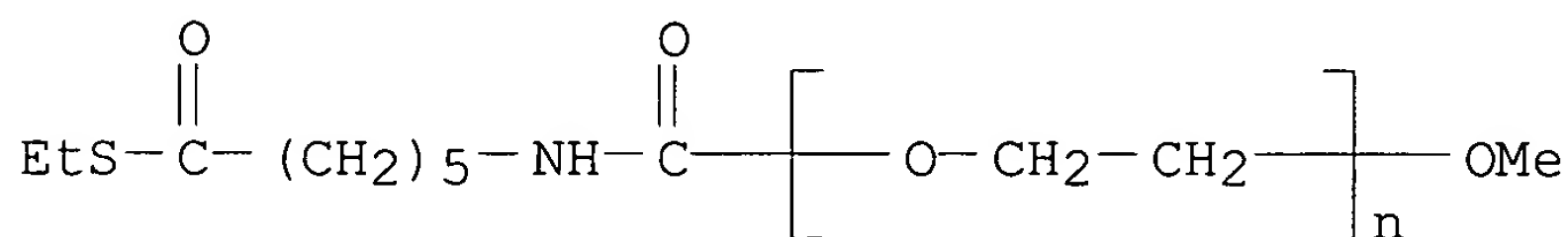
RN 620597-30-0 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-oxo-6-[(2,2,2-trifluoroethyl)thio]hexyl]amino]carbonyl]- ω -methoxy- (9CI)
(CA INDEX NAME)



RN 620597-31-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[6-(ethylthio)-6-oxohexyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K

CC 63-3 (Pharmaceuticals)

Section cross-reference(s): 35

IT 135649-01-3P 620597-18-4P 620597-19-5P 620597-20-8P
 620597-21-9P 620597-22-0P 620597-23-1P 620597-24-2P
 620597-25-3P 620597-26-4P **620597-27-5P**
620597-28-6P 620597-29-7P 620597-30-0P
620597-31-1P 693252-88-9P 705261-18-3P 705261-19-4P
 705261-20-7P 705261-21-8P

(biol. materials activated with **polyethylene glycol** compds.)

L25 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:656446 HCAPLUS

DOCUMENT NUMBER: 139:180851

TITLE: Thioester-terminated water-soluble polymers and method of modifying the n-terminus of a polypeptide therewith

INVENTOR(S): Roberts, Michael J.; Fang, Zhihao

PATENT ASSIGNEE(S): Shearwater Corporation, USA

SOURCE: U.S. Pat. Appl. Publ., 16 pp., Cont.-in-part of U.S. Ser. No. 973,318.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

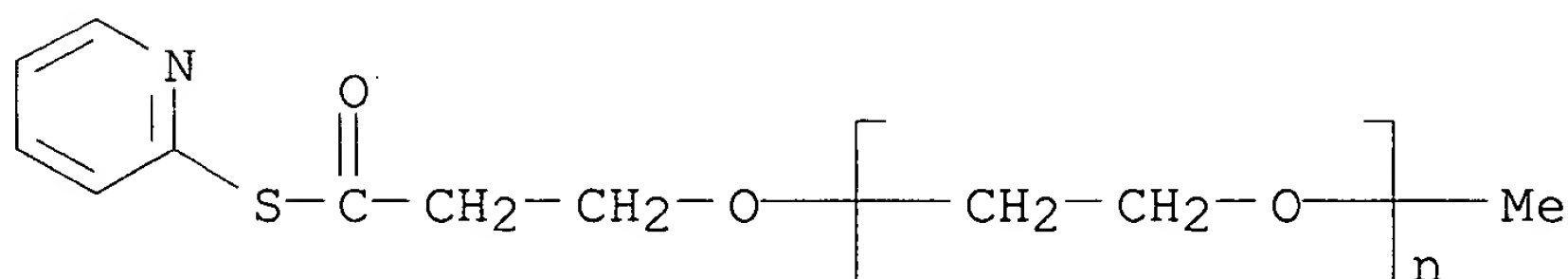
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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200210
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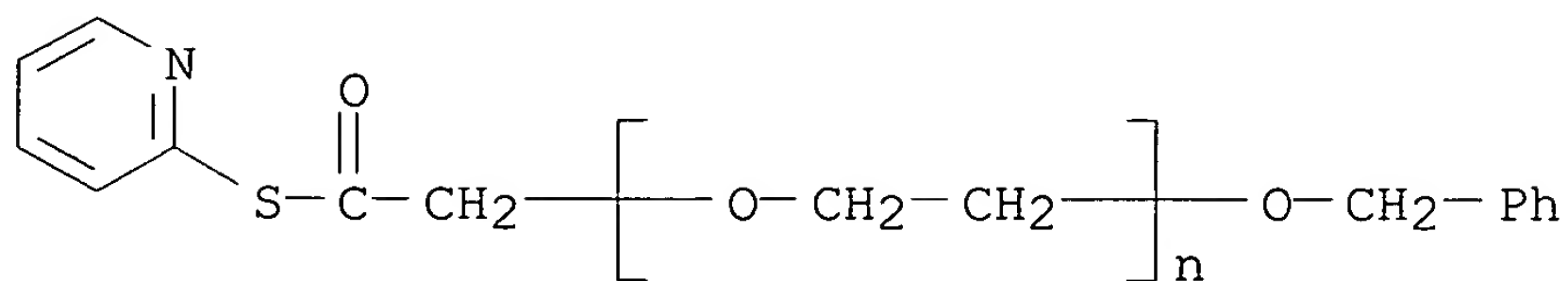
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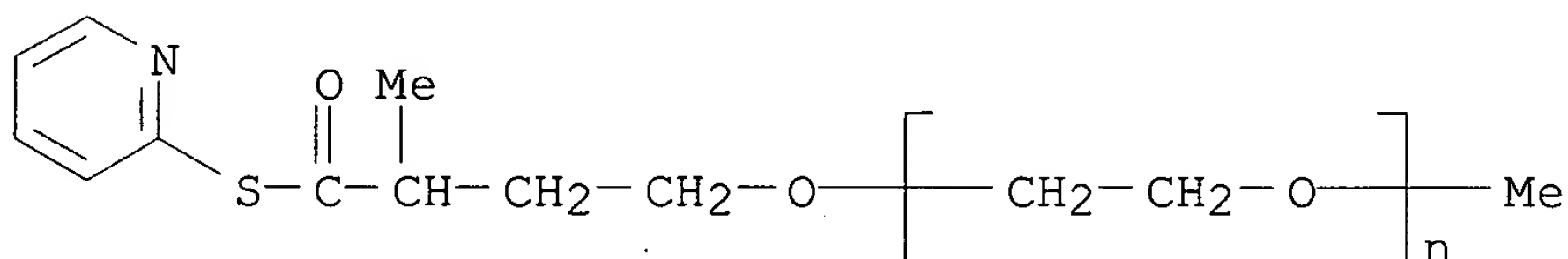
CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-oxo-3-(2-pyridinylthio)propoxy]-(9CI) (CA INDEX NAME)



CN Poly(oxy-1,2-ethanediyl), α -[2-oxo-2-(2-pyridinylthio)ethyl]-
 ω -(phenylmethoxy)- (9CI) (CA INDEX NAME)



RN 511272-30-3 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-methyl-4-oxo-4-(2-pyridinylthio)butoxy]- (9CI) (CA INDEX NAME)



IC ICM C08G063-48
 ICS C08G063-91
 NCL 525054110; 525054200
 CC 37-3 (Plastics Manufacture and Processing)
 Section cross-reference(s): 6
 IT 9002-89-5DP, Poly(vinyl alcohol), thioester-terminated
 9003-39-8DP, Poly(vinylpyrrolidone), thioester-terminated
511272-28-9P, Polyethylene glycol
 - α -methoxy- ω -propionic Acid, 2-pyridylthioester
511272-29-0P, Polyethylene glycol
 - α -benzyloxy- ω -carboxymethyl, 2-pyridylthioester
511272-30-3P, Polyethylene glycol
 - α -methoxy- ω -2-methyl butanoic acid, 2-pyridylthioester
 (thioester-terminated water-soluble polymers and method of
 modifying the n-terminus of a
 polypeptide therewith)

L25 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2003:438109 HCAPLUS
 DOCUMENT NUMBER: 140:47157
 TITLE: Synthesis and hydrolytic behavior of
 2-mercaptoethyl ibuprofenate-polyethylene glycol
 conjugate as a novel transdermal prodrug
 AUTHOR(S): Davaran, Soodabeh; Rashidi, Mohammad R.;
 Hashemi, Mahdi
 CORPORATE SOURCE: Drug Applied Research Centre, Tabriz University
 of Medical Sciences, Tabriz, Iran
 SOURCE: Journal of Pharmacy and Pharmacology (2003),

55(4), 513-517

CODEN: JPPMAB; ISSN: 0022-3573

PUBLISHER:

Pharmaceutical Press

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB Thiolated derivs. of ibuprofen and its polyethylene glycol ester were synthesized via condensation of 2-mercaptoethyl ibuprofenate with carboxy-terminated polyethylene glycol. The release of ibuprofen from this polymeric prodrug has been studied under conditions simulating those encountered in the skin. The polymeric prodrug of ibuprofen was found to undergo pH-dependent hydrolysis, ranging from negligible hydrolysis at pH 4 to 23.9% hydrolysis at pH 8.5 (15% at pH 7.4) after 48 h at 37°C. The polymer-drug conjugate was subjected to enzymic hydrolysis in human plasma. The polymer showed considerable enzymic hydrolysis (68% after 48 h). The results showed that the polymeric prodrug model of non-steroidal anti-inflammatory drugs (NSAIDs) described here can be used in topical formulations of NSAIDs. It is expected that the novel thiol derivative will have both enhanced transdermal penetration and stability to oxidation which make it a suitable candidate for transdermal formulations.

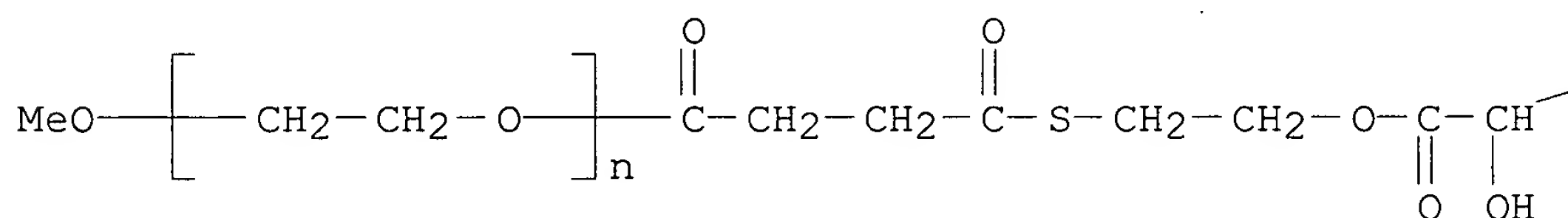
IT 635306-09-1P

(synthesis and hydrolysis of 2-mercaptoethyl ibuprofenate-polyethylene glycol conjugate as a novel transdermal prodrug)

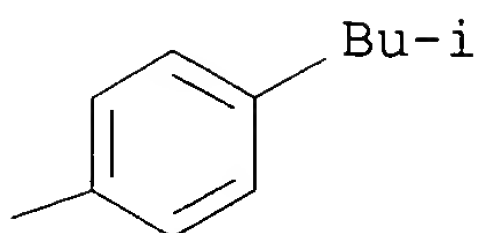
RN 635306-09-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[4-[[2-[[hydroxy[4-(2-methylpropyl)phenyl]acetyl]oxy]ethyl]thio]-1,4-dioxobutyl]- ω -methoxy- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 25, 35

IT **635306-09-1P**
(synthesis and hydrolysis of 2-mercaptoethyl ibuprofenate-
polyethylene glycol conjugate as a
novel transdermal prodrug)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L25 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:301190 HCAPLUS

DOCUMENT NUMBER: 138:321757

TITLE: Thioester-terminated water soluble polymers and
method of modifying the N-terminus of a
polypeptide therewith

INVENTOR(S): Roberts, Michael James; Fang, Zhihao

PATENT ASSIGNEE(S): Shearwater Corporation, USA

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2003031581	A2	20030417	WO 2002-US32219	20021009

WO 2003031581 A3 20031016

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,

EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
 TG

US 2003105224 A1 20030605 US 2001-973318

200110
 09

EP 1434589 A2 20040707 EP 2002-795502

200210
 09

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

PRIORITY APPLN. INFO.:

US 2001-973318 A

200110
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WO 2002-US32219 W

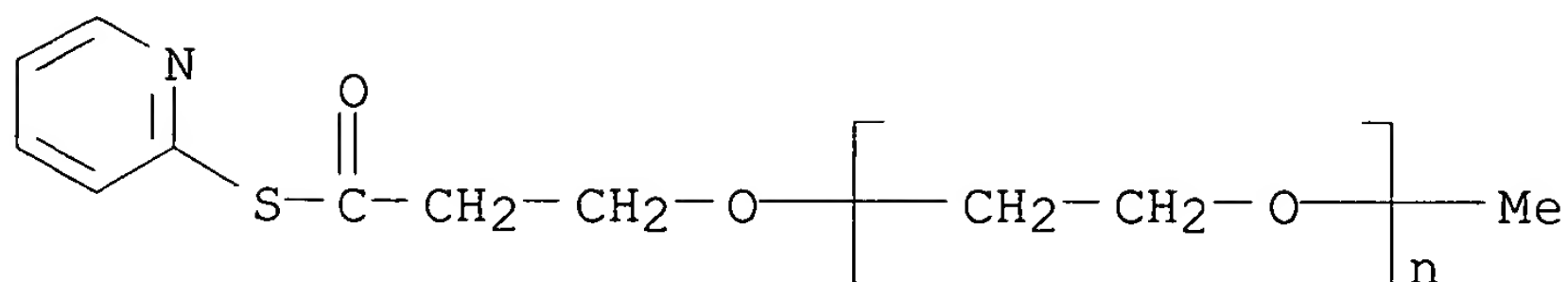
200210
 09

AB The invention provides reagents and methods for conjugating a polymer specifically to the α -amine of a polypeptide. The invention provides monofunctional, bifunctional, and multifunctional PEGs and related polymers having a terminal thioester moiety capable of specifically conjugating to the α -amine of a polypeptide having a cysteine or histidine residue at the N-terminus. The invention provides reactive thioester-terminated PEG polymers that have suitable reactivity with an N-terminal cysteine or histidine residue of a polypeptide to produce an amide bond between the PEG mol. and the polypeptide. Thus, a cysteine-terminated Interferon tau was modified with poly(ethylene glycol) α -methoxy, ω -propionic acid, 2-pyridylthioester.

IT **511272-28-9DP, Poly(ethylene glycol)**
 α -methoxy, ω -propionic acid, 2-pyridylthioester,
 reaction products with peptides **511272-29-0DP, Poly(ethylene glycol)** α -benzyloxy- ω -
 carboxymethyl, 2-pyridylthioester, reaction products with peptides
511272-30-3DP, Poly(ethylene glycol)
 α -methoxy- ω -2-methyl butanoic acid, 2-pyridylthioester,
 reaction products with peptides
 (modification of N-terminated
polypeptide using thioester-terminated water soluble
 polymers)

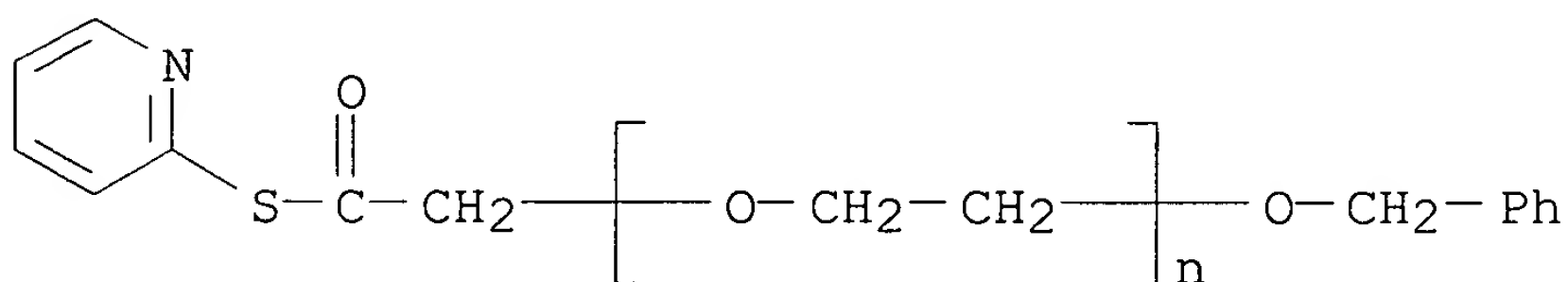
RN 511272-28-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-oxo-3-(2-
 pyridinylthio)propoxy]- (9CI) (CA INDEX NAME)



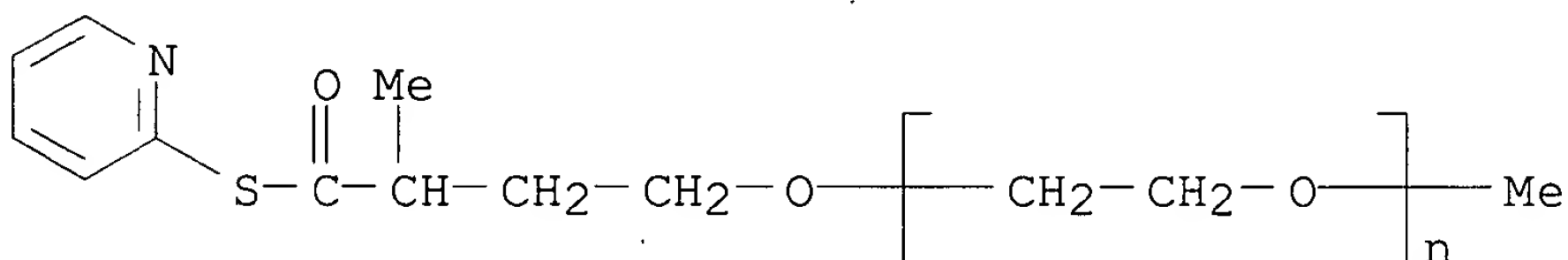
RN 511272-29-0 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[2-oxo-2-(2-pyridinylthio)ethyl]-
 ω -(phenylmethoxy)- (9CI) (CA INDEX NAME)



RN 511272-30-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-methyl-4-oxo-4-(2-pyridinylthio)butoxy]- (9CI) (CA INDEX NAME)



IC ICM C12N

CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 64

IT 172956-96-6DP, reaction products with Thioester-terminated polymer
511272-28-9DP, Poly(**ethylene glycol**)
 α -methoxy, ω -propionic acid, 2-pyridylthioester,
 reaction products with peptides **511272-29-0DP**, Poly(
ethylene glycol) α -benzyloxy- ω -
 carboxymethyl, 2-pyridylthioester, reaction products with peptides
511272-30-3DP, Poly(**ethylene glycol**)
 α -methoxy- ω -2-methyl butanoic acid, 2-pyridylthioester,
 reaction products with peptides
 (modification of N-terminated
 polypeptide using thioester-terminated water soluble
 polymers)

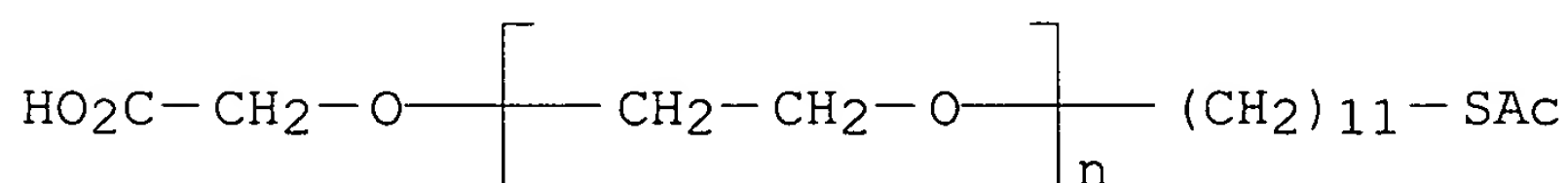
L25 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2003:1651 HCAPLUS
 DOCUMENT NUMBER: 138:183401
 TITLE: Covalent coupling of antibodies to self-assembled monolayers of carboxy-functionalized poly(ethylene glycol): Protein resistance and specific binding of biomolecules
 AUTHOR(S): Herrwerth, S.; Rosendahl, T.; Feng, C.; Fick, J.; Eck, W.; Himmelhaus, M.; Dahint, R.; Grunze, M.
 CORPORATE SOURCE: Angewandte Physikalische Chemie, Universitaet Heidelberg, Heidelberg, 69120, Germany
 SOURCE: Langmuir (2003), 19(5), 1880-1887
 CODEN: LANGD5; ISSN: 0743-7463
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB We report the synthesis, film formation, protein resistance, and specific antigen binding capability of a carboxy-functionalized poly(ethylene glycol) alkanethiol [HOOC-CH₂-(OCH₂-CH₂)_n-O-(CH₂)₁₁-SH, n = 22-45]. Despite its polymeric character, the mol. is found to form a densely packed self-assembled monolayer on polycryst. gold, if adsorbed from DMF solution. Due to its chain length distribution, the carboxy tailgroups are expected to be partially buried within the film and, thus, do not affect the protein repulsive characteristics of the ethylene glycol moieties when exposed to fibrinogen and IgG (IgG). However, if activated by N-hydroxysuccinimide and N-(3-dimethylaminopropyl)-N-ethylcarbodiimide hydrochloride, antibodies can be covalently coupled to the monolayer. While resistance to nonspecific fibrinogen and IgG adsorption is maintained for this biol. active layer, it exhibits high specific antigen binding capacity. The performance of this highly selective surface is compared to that of antibody films prepared by standard aminosilane chemical

IT 498553-37-0P
 (covalent coupling of antibodies to self-assembled monolayers of carboxy-functionalized poly(ethylene glycol))

RN 498553-37-0 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-[11-(acetylthio)undecyl]-ω-(carboxymethoxy)- (9CI) (CA INDEX NAME)



CC 9-16 (Biochemical Methods)

Section cross-reference(s): 15

IT 442852-82-6P 498553-36-9P 498553-37-0P

(covalent coupling of antibodies to self-assembled monolayers of
carboxy-functionalized poly(ethylene glycol))

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L25 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:849373 HCAPLUS

DOCUMENT NUMBER: 137:358081

TITLE: Diagnostic imaging compositions, their methods
of synthesis, and use

INVENTOR(S): Li, Chun; Wen, Xiaoxia; Wu, Qing-Ping; Wallace,
Sydney; Ellis, Lee M.

PATENT ASSIGNEE(S): Board of Regents, the University of Texas
System, USA

SOURCE: PCT Int. Appl., 84 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2002087498	A2	20021107	WO 2002-US12510	200204 19
WO 2002087498	A3	20031030		
WO 2002087498	C1	20031211		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2444483	AA	20021107	CA 2002-2444483	200204 19
US 2002197261	A1	20021226	US 2002-126369	200204

US 2003003048	A1	20030102	US 2002-126216	19
				200204
				19
EP 1389090	A2	20040218	EP 2002-766783	200204
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRIORITY APPLN. INFO.:			US 2001-286453P	P
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			US 2001-343147P	P
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			WO 2002-US12510	W
				200204
				19

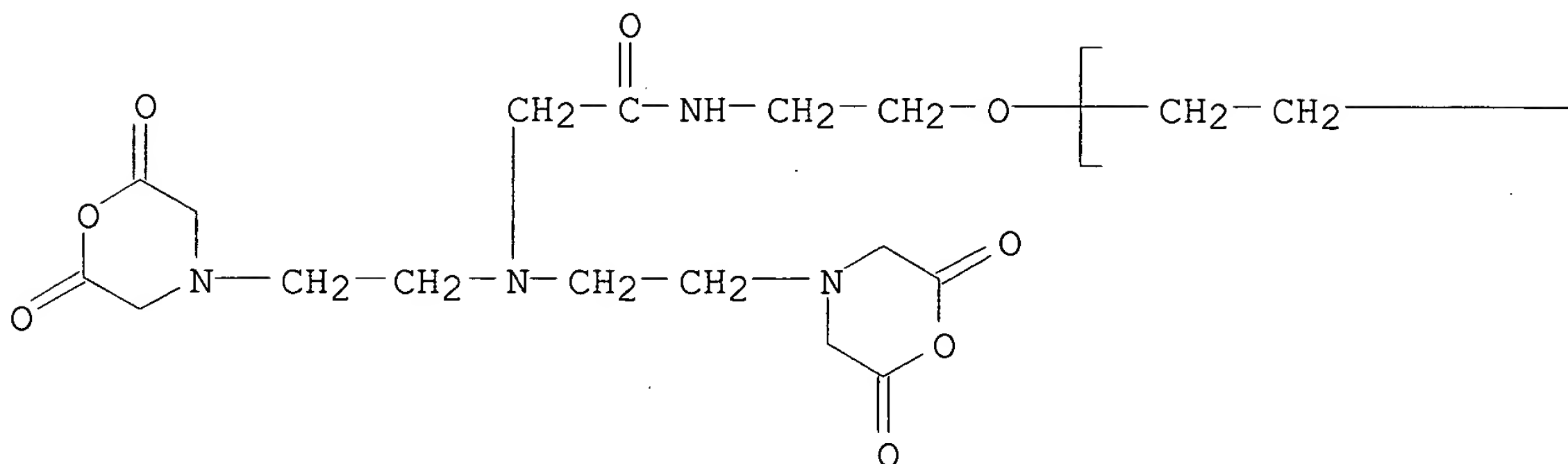
AB Conjugate mols. comprising a ligand bonded to a polymer are disclosed. One such conjugate mol. comprises a ligand bonded to a polymer, a chelating agent bonded to the polymer, and a radioisotope chelated to the chelating agent. The conjugate mols. may be useful in detecting and/or treating tumors or biol. receptors. These conjugate mols. may be synthesized without the necessity of preactivation of the ligand using an SCN-polymer-chelating agent precursor. Conjugate mols. incorporating an annexin V ligand are particularly useful for visualizing apoptotic cells. Conjugate mols. incorporating a C225 ligand are particularly useful for targeting tumors expressing EGFR.

IT **474816-75-6P**
(diagnostic imaging compns. comprising radiolabeled
conjugates)

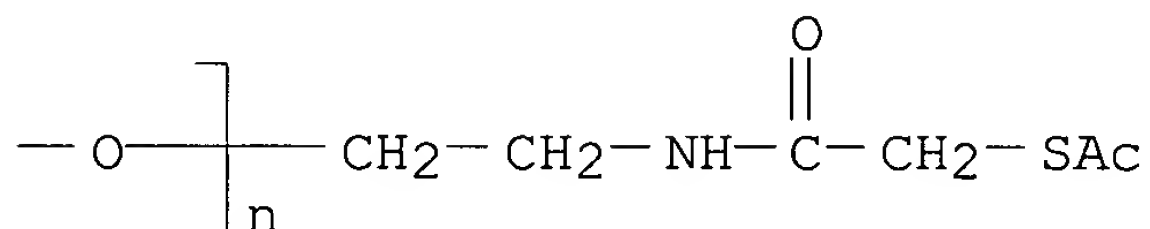
RN 474816-75-6 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[2-[[(acetylthio)acetyl]amino]ethy
l]- ω -[2-[[[bis[2-(2,6-dioxo-4-morpholinyl)ethyl]amino]acetyl]a
mino]ethoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM A61K
 CC 63-5 (Pharmaceuticals)
 Section cross-reference(s): 1, 8
 IT 474816-74-5P **474816-75-6P** 474816-76-7P 474816-77-8P
 474816-78-9P
 (diagnostic imaging compns. comprising radiolabeled
conjugates)

L25 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2002:796717 HCAPLUS
 DOCUMENT NUMBER: 138:25181
 TITLE: Grafting of Alkanethiol-Terminated Poly(ethylene glycol) on Gold
 AUTHOR(S): Tokumitsu, S.; Liebich, A.; Herrwerth, S.; Eck, W.; Himmelhaus, M.; Grunze, M.
 CORPORATE SOURCE: Lehrstuhl fuer Angewandte Physikalische Chemie, Universitaet Heidelberg, Heidelberg, 69120, Germany
 SOURCE: Langmuir (2002), 18(23), 8862-8870
 CODEN: LANGD5; ISSN: 0743-7463
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The grafting of alkanethiol-terminated poly(ethylene glycol) [HS(CH₂)₁₁(OCH₂CH₂)_n-OCH₃; n = 34-56, MW ≈ 2224 Da] onto polycryst. gold from dilute solns. was investigated by ellipsometry, XPS, IR reflection-absorption spectroscopy, and in situ second harmonic generation. After immersion of a gold-coated Si wafer into a 50 μM DMF solution, the thickness of the grafted layer increases in a first rapid step up to .apprx.20 Å. After about 10 min, the thickness rises notably again and reaches saturation after .apprx.2 h

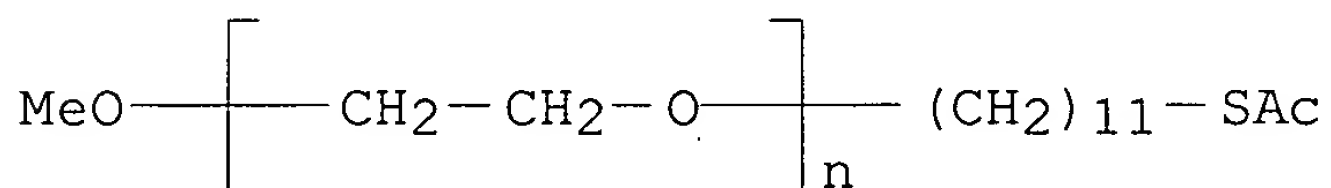
at .apprx.120 Å. The kinetics of film formation clearly deviate from Langmuir kinetics, which is normally observed for the self-assembly of nonfunctionalized alkanethiols. The observation can be explained by a conformational transition of the grafted poly(ethylene glycol) chains from amorphous coils to a brush morphol., predominantly consisting of helixes with an orientation perpendicular to the surface. The second harmonic generation expts. show that the coverage at saturation of adsorption corresponds to .apprx.90% that of self-assembled monolayers of alkanethiols, indicating a densely packed film.

IT 478170-77-3P

(intermediate; conformational and self-assembly aspects to grafting of alkanethiol-terminated poly(**ethylene glycol**) on gold)

RN. 478170-77-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-[11-(acetylthio)undecyl]-ω-methoxy- (9CI) (CA INDEX NAME)



CC 36-6 (Physical Properties of Synthetic High Polymers)

IT 215360-19-3P 478170-77-3P

(intermediate; conformational and self-assembly aspects to grafting of alkanethiol-terminated poly(**ethylene glycol**) on gold)

REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

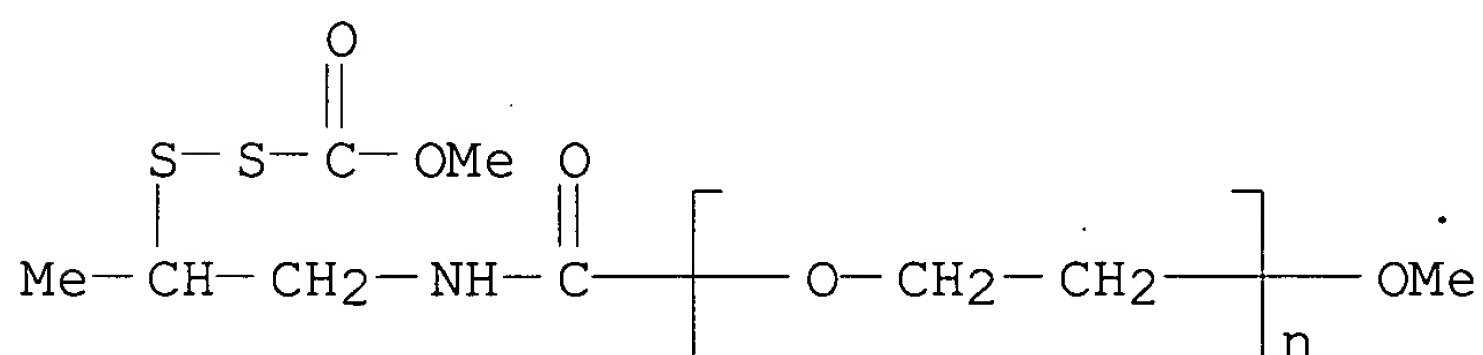
ACCESSION NUMBER: 2002:625021 HCAPLUS

DOCUMENT NUMBER: 137:353475

TITLE: Reversible, dithiobenzyl urethane linked polymer-protein conjugates

AUTHOR(S): Zalipsky, Samuel; Kiwan, Radwan; Mullah, Nasreen

CORPORATE SOURCE: Alza Corporation, Mountain View, CA, 94043, USA
 SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2002), 43(2), 693-694
 CODEN: ACPPAY; ISSN: 0032-3934
 PUBLISHER: American Chemical Society, Division of Polymer Chemistry
 DOCUMENT TYPE: Journal; (computer optical disk)
 LANGUAGE: English
 AB Attachment of methoxy-poly(**ethylene glycol**) (mPEG) to **protein** amino groups via dithiobenzyl (DTB) carbamate linkage results in a conjugate capable of losing its PEG coating by reacting with thiols (e.g., Cys). A new reagent, mPEG-DTB-NPC, was prepared and evaluated on a model protein, lysozyme. Thiolytic decomposition of mPEG-DTB-lysozyme lead to recovery of the original protein (by LC-MS) concomitantly with its bacterial cell-wall lysing activity. The results suggest suitability of this approach for temporary PEGylation of therapeutic proteins, which dramatically lose their activity when subjected to permanent PEGylation. Since scission of accessible disulfides under in vivo conditions is known, we anticipate the mPEG-DTB-proteins to behave as macromol. prodrugs.
 IT **304013-18-1P**
 (reversible, dithiobenzyl urethane **linked** polymer-protein **conjugates**)
 RN 304013-18-1 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α -[[[2-[(methoxycarbonyl)dithio]propyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)

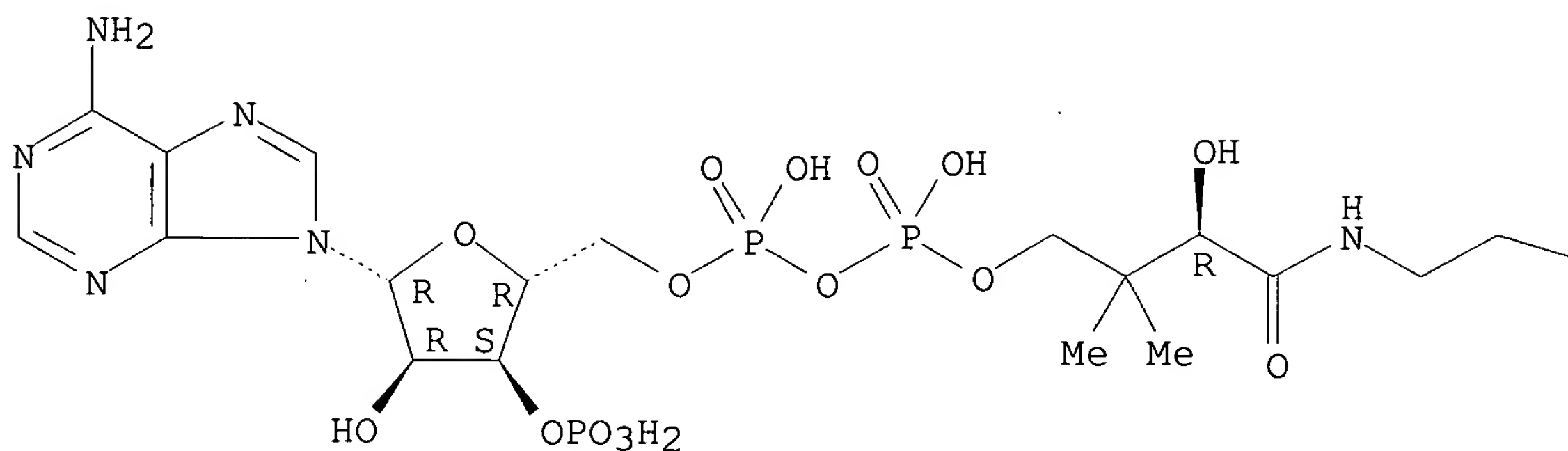


CC 35-8 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 34, 63
 IT 51023-28-0P **304013-18-1P** 304013-19-2P 474404-82-5P
 (reversible, dithiobenzyl urethane **linked** polymer-protein **conjugates**)
 REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

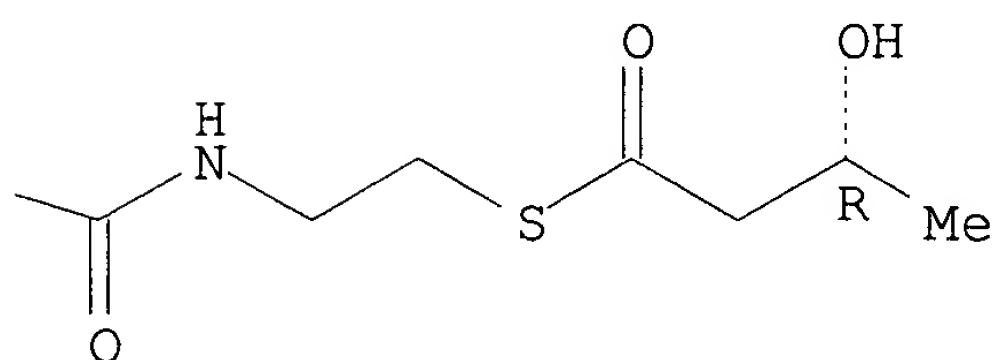
• ACCESSION NUMBER: 2002:232103 HCAPLUS
DOCUMENT NUMBER: 137:20718
TITLE: Enzymatic surface-initiated polymerization of
3-(R)-hydroxybutyryl-coenzyme A: Surface
modification of a solid substrate with a
biodegradable and biocompatible polymer:
poly(3-hydroxybutyrate)
AUTHOR(S): Kim, Young-Rok; Paik, Hyun-jong; Ober,
Christopher K.; Coates, Geoffrey W.; Batt, Carl
A.
CORPORATE SOURCE: Nanobiotechnology Center, Dep. Food Sci.,
Cornell Univ., Ithaca, NY, 14853-1501, USA
SOURCE: Polymer Preprints (American Chemical Society,
Division of Polymer Chemistry) (2002), 43(1),
706-707
CODEN: ACPPAY; ISSN: 0032-3934
PUBLISHER: American Chemical Society, Division of Polymer
Chemistry
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English
AB The enzymic surface-initiated polymerization of
3-(R)-hydroxybutyryl-CoA to
produce polyesters, PHB, using PHB synthase immobilized on solid
substrate is described. PHB synthase fused with a poly-His tag was
immobilized on silicon and agarose bead through a Ni-NTA linker, and
the enzyme retained the activity to synthesize PHB in its
immobilized form. Synthesized polymer on the surfaces was
characterized with FTIR, AFM and Confocal laser scanning microscopy.
AFM micrographs showed that the Si/SiO₂ surface was completely
covered with PHB film with the roughness (rms) as high as 21 nm. To
the authors' knowledge, this is the first example of enzymic
surface-initiated polymerization
IT **434333-51-4P**
(enzymic surface-initiated polymerization of
3-(R)-hydroxybutyryl-CoA
and surface **modification** of solid substrates with
prepared biodegradable and biocompatible polyester)
RN 434333-51-4 HCAPLUS
CN Coenzyme A, S-[(3R)-3-hydroxybutanoate], homopolymer (9CI) (CA
INDEX NAME)
CM 1
CRN 21804-29-5
CMF C25 H42 N7 O18 P3 S

Absolute stereochemistry. Rotation (-).

PAGE 1-A



PAGE 1-B



CC 35-7 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 26, 37

IT 434333-51-4P

(enzymic surface-initiated polymerization of
3-(R)-hydroxybutyryl-CoAand surface **modification** of solid substrates with
prepared biodegradable and biocompatible polyester)REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L25 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:712292 HCAPLUS

DOCUMENT NUMBER: 136:374762

TITLE: A tissue sealant based on reactive
multifunctional polyethylene glycolAUTHOR(S): Wallace, D. G.; Cruise, G. M.; Rhee, W. M.;
Schroeder, J. A.; Prior, J. J.; Ju, J.; Maroney,
M.; Duronio, J.; Ngo, M. H.; Estridge, T.;
Coker, G. C.

CORPORATE SOURCE: Cohesion Technologies, Palo Alto, CA, 94303, USA

SOURCE: Journal of Biomedical Materials Research (2001),
58(5), 545-555

CODEN: JBMRBG; ISSN: 0021-9304

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A rapidly gelling synthetic tissue sealant was developed from tetra-succinimidyl and tetra-thiol-derivatized polyethylene glycol (PEG). The two reagents were dissolved in aqueous buffers at 20% (w/v)

solids and sprayed on the tissue site, with the use of a sprayer/mixer device. Good adhesion to collagen membranes, PTFE grafts, and carotid artery was observed in vitro. In a burst test on collagen membranes with a 2-mm orifice defect, the gel sustained fluid pressures of 125 ± 36 mm Hg ($n = 18$), fivefold greater than capillary blood pressure and one-half that observed in hypertension. On 0.4-mm-diameter puncture defects in PTFE grafts, pressures of 390-490 mm Hg were sustained, and on 0.6-0.9-mm puncture defects in carotid arteries, pressures of 490 to 840 mm Hg were sustained. In vitro data corresponded to results in vivo, where bleeding in rabbit arteries was stopped immediately in five out of six trials. A significant reduction in time to hemostasis and blood loss, compared to

controls, was observed Carotid artery and s.c. implant data in rabbits

showed that the formula was compatible with biol. tissue. Rapid gelling and effective sealing were dependent on the presence of active succinimidyl ester and thiol groups on PEG. HPLC and chemical substitution methods were useful in predicting whether batches of derivatized PEG would perform satisfactorily.

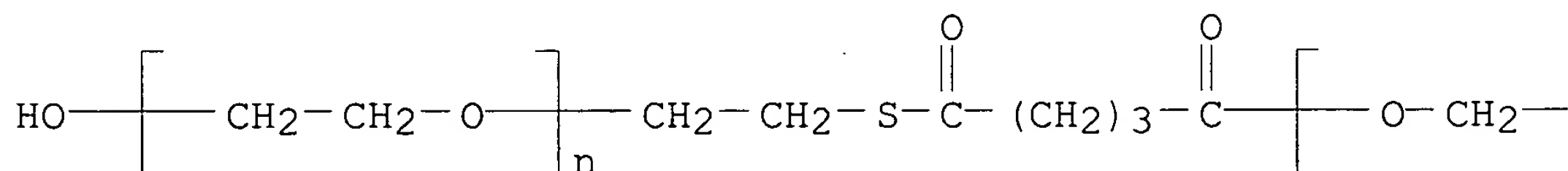
IT 422304-33-4P

(tissue sealant based on reactive multifunctional
polyethylene glycol)

RN 422304-33-4 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[5-[(2-hydroxyethyl)thio]-1,5-dioxopentyl]- ω -hydroxy-, 2-ether with α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

PAGE 1-A



$$\text{---CH}_2\text{---}\left[\begin{array}{c} | \\ \text{---} \\ | \end{array} \right]_n \text{OH}$$

(tissue sealant based on reactive multifunctional polyethylene glycol)

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2000064483	A2	20001102	WO 2000-US10830	20000421
WO 2000064483	A3	20010802		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
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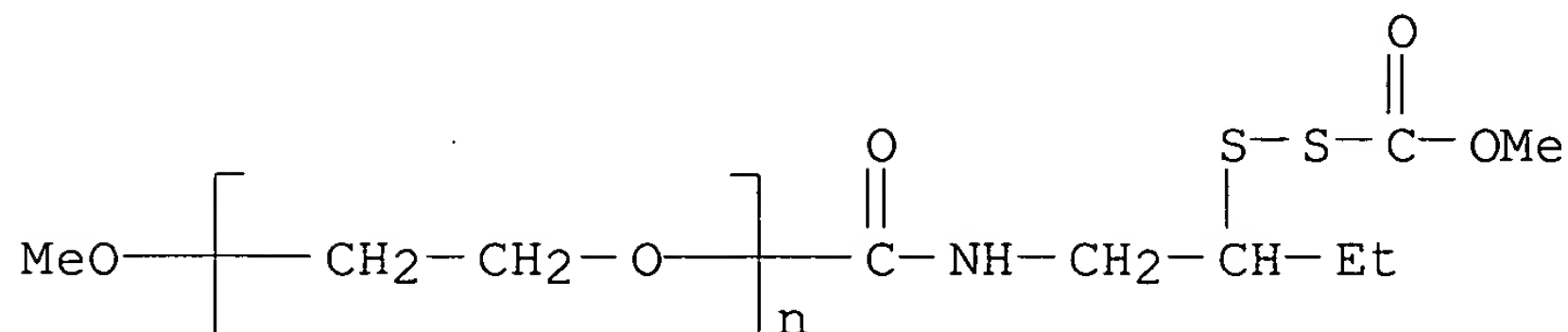
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PT, IE, SI, LT, LV, FI, RO				
JP 2002542386	T2	20021210	JP 2000-613473	200004
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NZ 514990	A	20040130	NZ 2000-514990	200004
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AU 770390	B2	20040219	AU 2000-43672	200004
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NO 2001005169	A	20011219	NO 2001-5169	200110
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ZA 2001008724	A	20021023	ZA 2001-8724	200110
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ZA 2001008726	A	20030305	ZA 2001-8726	200110
				23
PRIORITY APPLN. INFO.:			US 1999-130897P	P
				199904
				23
			WO 2000-US10830	W
				200004
				21

AB A compound comprised of a hydrophilic polymer covalently yet reversibly linked to an amine-containing ligand through a dithiobenzyl linkage is described. O- and p-methoxy polyethylene glycol-urethane-ethyldithiobenzyl-distearoylphosphatidyl ethanolamine were prepared and combined with dioleoyl phosphatidylethanolamine (DOPE) to obtain liposomes having an average diameter of 100 nm.

IT **304013-09-0**
 (preparation of **conjugates** of amine-containing **drugs** with hydrophilic polymers through dithiobenzyl **linkages**)

RN 304013-09-0 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[2-[(methoxycarbonyl)dithio]butyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)

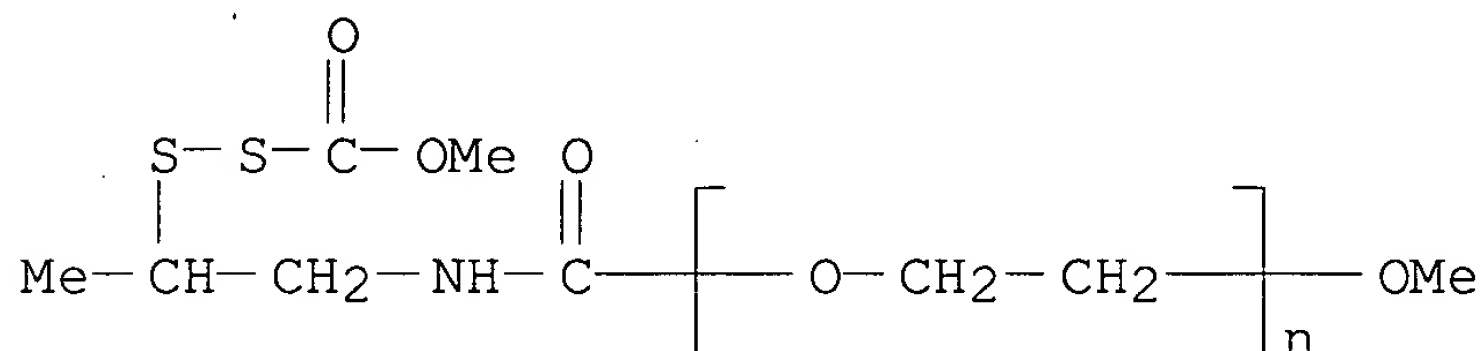


IT 304013-18-1P

(preparation of **conjugates** of amine-containing **drugs** with hydrophilic polymers through dithiobenzyl **linkages**)

RN 304013-18-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[[[2-[(methoxycarbonyl)dithio]propyl]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K047-48

CC 63-6 (Pharmaceuticals)

IT 75-15-0, Carbon disulfide, reactions 78-96-6, 1-Amino-2-propanol
107-15-3, 1,2-Ethanediamine, reactions 124-63-0, Methane sulfonyl
chloride 3695-77-0, Triphenylmethanethiol 4537-76-2,
Distearoylphosphatidyl ethanolamine 7664-93-9, Sulfuric acid,
reactions 7693-46-1, p-Nitrophenyl chloroformate 9004-74-4,
Methoxy polyethylene glycol 10567-21-2 13552-21-1,
1-Amino-2-butanol 26555-40-8 53339-53-0, 4-Mercaptobenzyl
alcohol **304013-09-0**

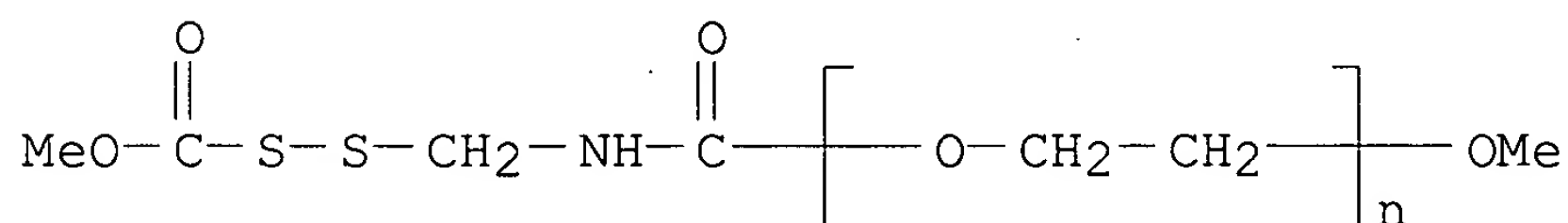
(preparation of **conjugates** of amine-containing **drugs** with hydrophilic polymers through dithiobenzyl **linkages**)

IT 926-25-0P 1437-71-4P 1437-90-7P, 5-Methylthiazolidine-2-thione
1437-92-9P 4146-02-5P 4146-16-1P 124661-64-9P 304013-12-5P
304013-14-7P 304013-16-9P **304013-18-1P** 304013-19-2P
304013-20-5P 304013-21-6P 304013-22-7P 304013-29-4P
304013-31-8P 304013-33-0P

(preparation of **conjugates** of amine-containing **drugs** with hydrophilic polymers through dithiobenzyl **linkages**)

L25 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:484826 HCAPLUS
DOCUMENT NUMBER: 131:303294
TITLE: New Detachable Poly(ethylene glycol) Conjugates:
Cysteine-Cleavable Lipopolymers Regenerating
Natural Phospholipid, Diacyl
Phosphatidylethanolamine
AUTHOR(S): Zalipsky, Samuel; Qazen, Masoud; Walker, John
A., II; Mullah, Nasreen; Quinn, Yolanda P.;
Huang, Shi Kun
CORPORATE SOURCE: Alza Corporation, Menlo Park, CA, 94025, USA
SOURCE: Bioconjugate Chemistry (1999), 10(5), 703-707
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A new strategy for the reversible attachment of methoxypolyethylene
glycol (mPEG) to an amino-containing substrate is described. The
strategy is based on formation of a benzyl carbamate linkage
substituted with a disulfide in the para or ortho position. While
being stable under nonreducing conditions, the dithiobenzyl (DTB)
urethane linkage is susceptible to cleavage by mild thiolysis with
cysteine resulting in release of the parent amino component of the
conjugate in its original form. The method is exemplified by
preparation
of mPEG-DTB-alc., its activation and attachment to
distearoylphosphatidylethanolamine (DSPE). The resulting
lipopolymer incorporates into liposomes, which are capable of losing
their polymer coating under conditions approximating those existing
in vivo. Implications for drug delivery are briefly discussed.
IT **247082-31-1P**
(detachable **PEG conjugates** as
cysteine-cleavable lipopolymers regenerating diacyl
phosphatidylethanolamine)
RN 247082-31-1 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α -[[[(methoxycarbonyl)dithio]methyl
]amino]carbonyl]- ω -methoxy- (9CI) (CA INDEX NAME)



CC 63-5 (Pharmaceuticals)
IT **247082-31-1P** 247082-32-2P 247082-33-3P 247082-34-4P
247082-35-5P
(detachable **PEG conjugates** as

cysteine-cleavable lipopolymers regenerating diacyl
phosphatidylethanolamine)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L25 ANSWER 18 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:213144 HCAPLUS

DOCUMENT NUMBER: 130:257347

TITLE: Bifunctional water-soluble polymer derivative
for complexation with proteins

INVENTOR(S): Tagawa, Toshiaki; Yada, Nobuhisa; Hirakawa,
Yoko; Hosokawa, Saiko; Suzuki, Tsutomu; Nagaike,
Kazuhiro

PATENT ASSIGNEE(S): Mitsubishi Chemical Corporation, Japan

SOURCE: Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 903152	A2	19990324	EP 1998-117466	199809 15
EP 903152	A3	19990707		
EP 903152	B1	20031112		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EP 1352662	A1	20031015	EP 2003-16154	199809 15
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
AT 253942	E	20031115	AT 1998-117466	199809 15
ES 2210635	T3	20040701	ES 1998-117466	199809 15
CA 2247764	AA	19990317	CA 1998-2247764	199809 16
US 2002025312	A1	20020228	US 1998-154028	199809

CN 1214348	A	19990421	CN 1998-119512	16
				199809
				17
JP 11152234	A2	19990608	JP 1998-263262	199809
				17
PRIORITY APPLN. INFO.:			JP 1997-251624	A
				199709
				17
			JP 1997-251625	A
				199709
				17
			EP 1998-117466	A3
				199809
				15

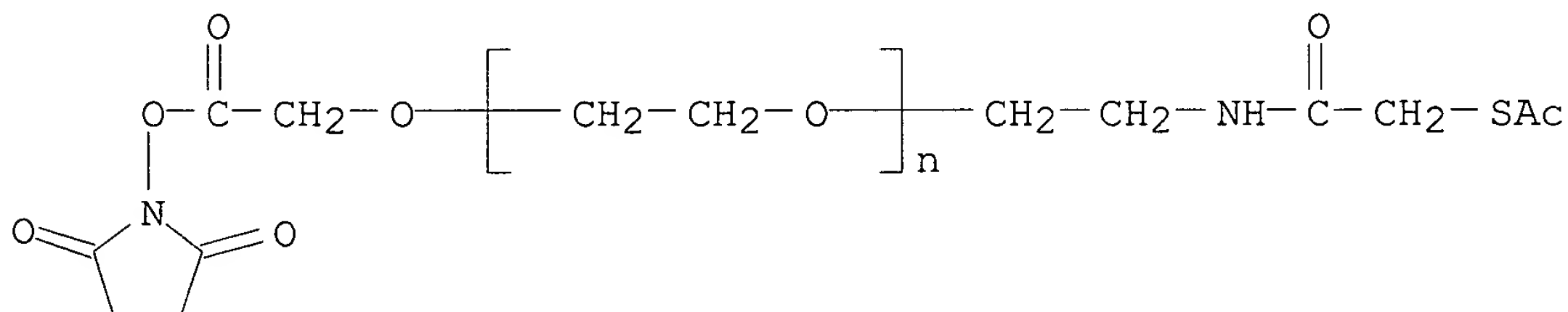
AB A bifunctional water-soluble polymer derivative having a moiety reactive with an amino group and a thiol group moiety or a latent thiol group moiety. A S-acetylthioglycolic acid PEG N-hydroxysuccinimide derivative

was prepared and coupled to mols. such as IgG and monoclonal antibodies.

IT **221354-28-5DP**, reaction products with proteins
(bifunctional water-soluble polymer derivative for complexation with proteins)

RN 221354-28-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[2-[[(acetylthio)acetyl]imino]ethyl]- ω -[2-[(2,5-dioxo-1-pyrrolidinyloxy)-2-oxoethoxy]- (9CI)
(CA INDEX NAME)

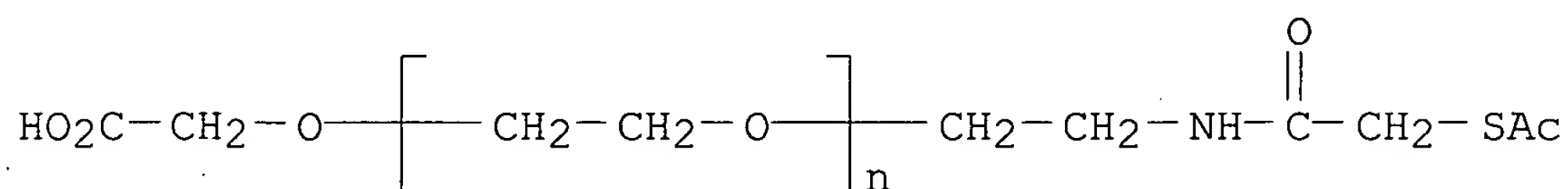


IT **221354-27-4P 221354-28-5P**

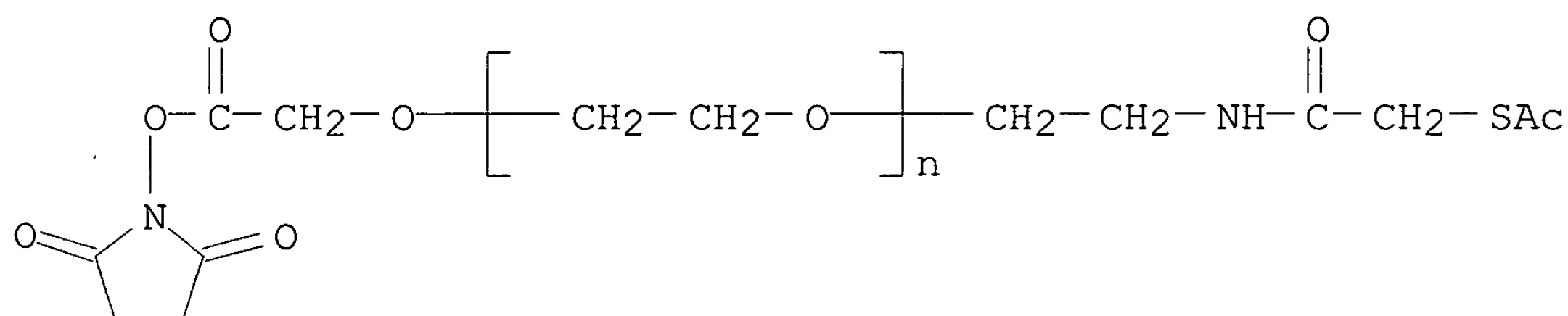
(bifunctional water-soluble polymer derivative for complexation with

proteins)

RN 221354-27-4 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[2-[[(acetylthio)acetyl]imino]ethyl]- ω -(carboxymethoxy)- (9CI) (CA INDEX NAME)

RN 221354-28-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[2-[[(acetylthio)acetyl]imino]ethyl]- ω -[2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethoxy]- (9CI) (CA INDEX NAME)

IC ICM A61K047-48

CC 63-6 (Pharmaceuticals)

ST PEG thio deriv **protein** complexIT **221354-28-5DP**, reaction products with proteins
(bifunctional water-soluble polymer derivative for complexation with

proteins)

IT **221354-27-4P 221354-28-5P 221354-32-1DP**,
reaction products with proteins **221354-32-1P**
(bifunctional water-soluble polymer derivative for complexation with
proteins)

L25 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:348027 HCAPLUS

DOCUMENT NUMBER: 129:58734

TITLE: Hydrophilic copolymers prepared from acrylic
type derivatives of ibuprofen containing
hydrolyzable thioester bond

AUTHOR(S): Davaran, Soodabeh; Entezami, Ali Akbar

CORPORATE SOURCE: Laboratory of Polymer, Faculty of Chemistry,

SOURCE: Tabriz University, Tabriz, Iran
European Polymer Journal (1998), 34(2), 187-192
CODEN: EUPJAG; ISSN: 0014-3057

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Hydrophilic copolymers of S-methacryloyloxyethyl- α -methyl-4-(2-methylpropyl)benzenethioacetate (MOETE), a methacrylic derivative of ibuprofen in which the drug is separated from the methacrylic counterpart by an oxyethylene spacer arm and hydrolytically labile thioester bond, were prepared by free radical copolymn. of MOETE with methacrylic acid, methacrylamide and vinylimidazole. A water-dispersible copolymer was prepared by copolymn. of polyethylene glycol methacrylate as a water-soluble macromonomer. The alkaline hydrolysis of resulting polymers in physiol. conditions showed that the drug can be released by selective hydrolysis of the thioester bond located between the drug moiety and oxyethylene spacer arm. The hydrolysis behavior of the drug containing copolymers was compared in similar conditions. The copolymer containing methacrylamide units was hydrolyzed rapidly. The influence of the chemical^q structure of

the drug carriers such as the polymer backbone, nature of hydrolyzable bond and the type of comonomer used as solubilizer as well as the hydrophilicity and mol. wts. of drug-polymer conjugates are discussed according to the hydrolysis behavior of the corresponding polymers.

IT 208463-95-0P

and (preparation of ibuprofen methacrylate derivative and its polymers
hydrolytic **drug** release)

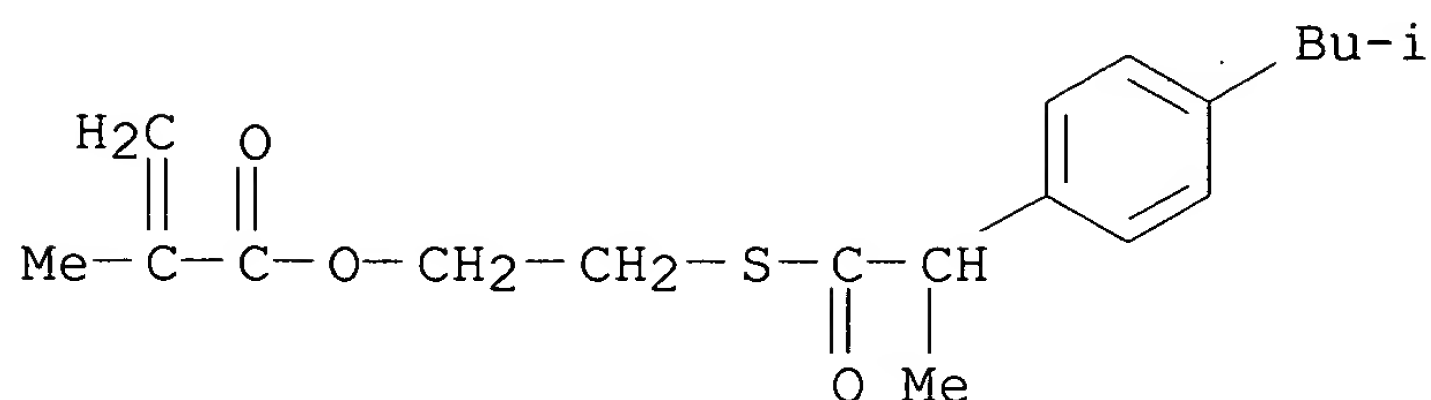
RN 208463-95-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[2-[4-(2-methylpropyl)phenyl]-1-oxopropyl]thio]ethyl ester, polymer with α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 208463-91-6

CMF C19 H26 O3 S

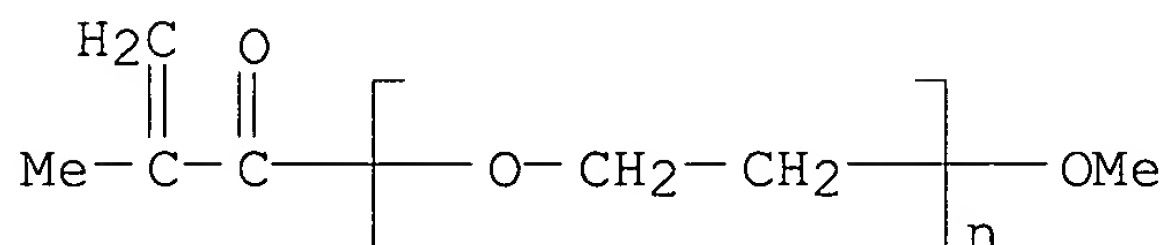


CM 2

CRN 26915-72-0

CMF (C2 H4 O)_n C5 H8 O2

CCI PMS



CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 35, 38

IT 208463-92-7P 208463-93-8P 208463-94-9P **208463-95-0P**

208463-96-1P 208539-85-9P

(preparation of ibuprofen methacrylate derivative and its polymers
and

hydrolytic **drug** release)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L25 'ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:41559 HCAPLUS

DOCUMENT NUMBER: 106:41559

TITLE: Electrophotographic photoreceptor

INVENTOR(S): Oaku, Kenichi; Guen, Chan Kee; Aizawa, Masao;
Nakano, Hiroshi

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61124951	A2	19860612	JP 1984-246177	19841122
PRIORITY APPLN. INFO.:			JP 1984-246177	19841122

AB The claimed electrophotog. photoreceptor contain halogenated In phthalocyanine whose x-ray diffraction pattern shows strong peaks at Bragg angle 2θ of 6.0, 12.4, 25.4, and 27.8°. The phthalocyanine derivative is dispersed in an appropriate binder. The photosensitive layer may also contain (1) ≥ 1 compound selected from indoline, quinoline and triphenylamine derivs., (2) a bisazo compound, and a (3) perylene derivative in addition to the phthalocyanine.

IT 106019-68-5

(binder, for chloroindium phthalocyanine-containing electrophotog. charge **carrier**-generating layer)

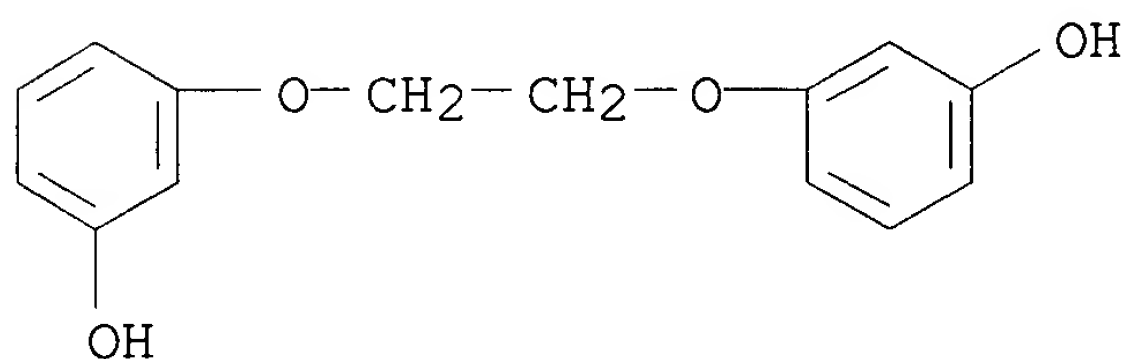
RN 106019-68-5 HCAPLUS

CN Carbonothioic acid, polymer with 3,3'-[1,2-ethanediylbis(oxy)]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 61166-00-5

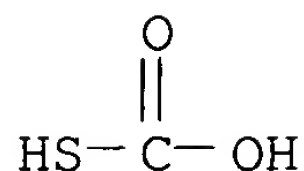
CMF C14 H14 O4



CM 2

CRN 10016-32-7

CMF C H2 O2 S



IC ICM G03G005-06
 ICS G03G005-04; H01L031-08
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 IT 9002-86-2D, chlorinated 9003-53-6, Polystyrene 9017-21-4,
 Poly(vinyl toluene) 24936-68-3, Poly(4,4'-
 isopropylidenediphenylcarbonate), uses and miscellaneous
 25037-45-0 25066-97-1, Ethyl acrylate-styrene copolymer
 25067-59-8, Poly(N-vinylcarbazole) 25068-38-6, PKHH 25135-52-8
 25747-73-3, Poly(vinylene carbonate) 26471-16-9 26781-55-5,
 Vinyl acetate-vinylidene chloride copolymer 26814-08-4
 26913-25-7 27708-78-7 27815-51-6 28135-05-9 28412-31-9D,
 chlorinated 28774-93-8 30142-60-0 30142-63-3 31133-78-5
 31497-85-5 31694-78-7 31884-94-3 38797-88-5 52684-16-9
 60163-92-0 106019-67-4 **106019-68-5** 106019-69-6
 106019-70-9 106049-59-6 106049-60-9 106069-78-7 106069-79-8
 106069-80-1
 (binder, for chloroindium phthalocyanine-containing electrophotog.
 charge **carrier**-generating layer)